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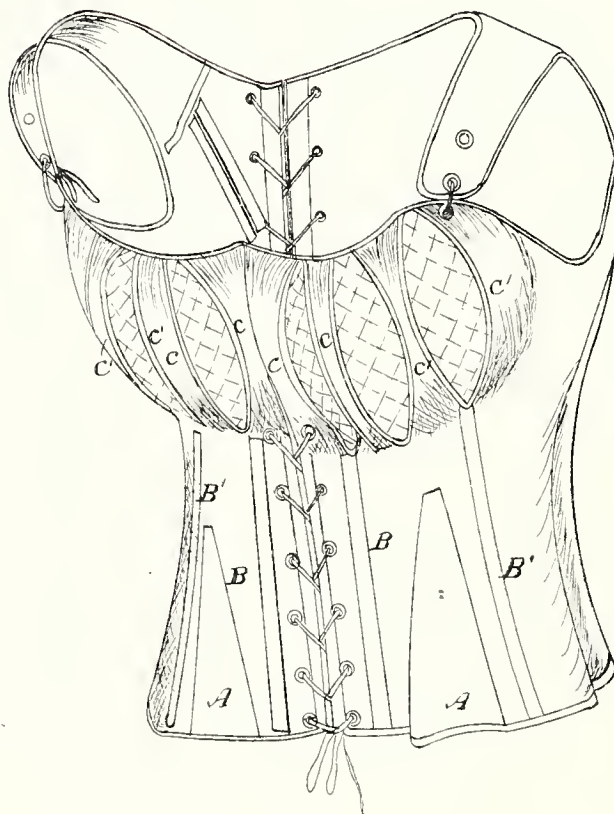
3 0144 00048934 4

A. J. Brooks,
Corset.

No. 36,272.

Patented Aug 26, 1862.

Fig 1



Witnesses

Wm. Child
Jas Robinson

Adeline J. Brooks

UNITED STATES PATENT OFFICE.

ADELINE J. BROOKS, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CORSETS.

Specification forming part of Letters Patent No. 36,272, dated August 26, 1862.

To all whom it may concern:

Be it known that I, ADELINE J. BROOKS, of Philadelphia, State of Pennsylvania, have made certain new and useful Improvements in Corsets; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawing, making a part of this specification, in which the figure represents a perspective view of my improved corset.

The object of my improvement is to produce a corset which, by its flexibility at certain points, will more fully develop the human figure and facilitate its natural movements. The upper portion of the corset is constructed in a usual manner without the use of an intermediate zone or belt, which impairs the flexible continuity of the garment. In the lower part gores A A are inserted. The drawing shows the two gores in front. In the back two similar gores are inserted. Four whalebones, B B' B B', extend down from the point

where the whalebones C and C and C' and C' meet. These whalebones rest against and are partially supported by the whalebones C and C. This corset is made somewhat longer than the usual kind. By the use of the gores A A and the whalebones C C a much better shape is given to the corset, and its adaptation to the body in the varied positions assumed is assured.

Having thus described my improvement, what I claim as my invention, and desire to secure by Letters Patent, is—

A corset comprising the bored pieces C' C' C C C C' C', straight pieces B' B B B', without an intermediate zone or band, and the gores A, all combined and arranged substantially as described.

ADELINE J. BROOKS.

Witnesses:

MINNIE CHILD,
JOS. ROBINSON.



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A. C. Wilhelm.

Lamp Burner.

N^o 39,856.

Patented Sep. 8, 1863.

Fig: 1.

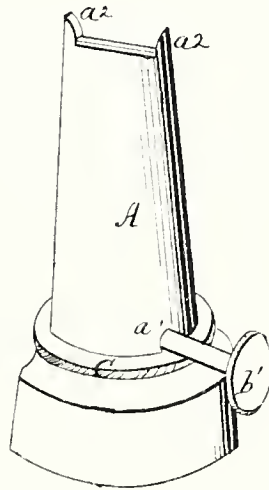


Fig: 2.

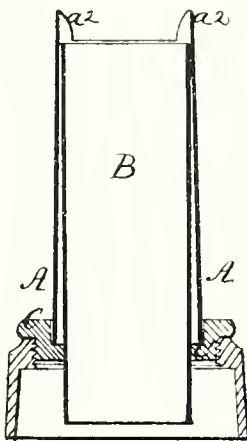
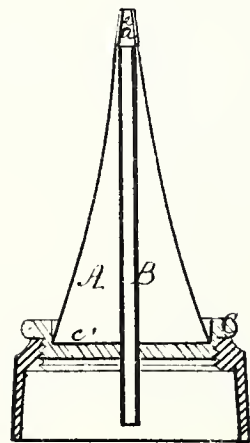


Fig: 3.



Witnesses;
Buy Morison
For. Neumann

Inventor;
Anna C Wilhelm

UNITED STATES PATENT OFFICE.

ANNA C. WILHELM, OF PHILADELPHIA, PENNSYLVANIA.

BURNER FOR COAL-OIL LAMPS.

Specification forming part of Letters Patent No. **39,856**, dated September 8, 1863; antedated May 13, 1863.

To all whom it may concern:

Be it known that I, ANNA C. WILHELM, wife of Charles Wilhelm, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Burners for Coal-Oil Lamps; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the same, and Figs. 2 and 3 vertical central sections at right angles to each other, like letters in the different figures indicating the same parts.

The object of this invention is the production of a burner for coal-oil lamps without a chimney, that will serve in a more effective and reliable manner in producing a bright light without smoke, and also in preventing an extinguishment of the flame by currents of air, in carrying the lamp about.

It consists in surrounding the wick-tube by a hollow tapering jacket, constructed and applied substantially as hereinafter described and specified, so as to prevent all access of currents of air to the sides of the wick-tube, tend to direct the immediately-surrounding air in upward currents to support the combustion, and also serve to protect the thin side edges of the flame at the wick from being extinguished by lateral currents of air.

In the drawings, A is the jacket, B the wick-tube, and C the supporting-base, whereby the whole is secured to the bowl of a lamp. The wick-tube in this instance is made flat throughout, extends upward from the base C about two inches, (more or less,) and is provided with the usual well-known wick adjusting device b' , as seen in Fig. 1.

The jacket A is constructed of thin plate metal, in the form shown in the drawings—*i. e.*, with its lower end sufficiently large in its diameter to fill the usual depression, c' , in the base from which the wick tube B rises, while its upper end is flattened so as to make it fit closely around the upper orifice of the said wick-tube, a small slot, a' , being cut in its lower end to receive the stem of the wick-adjuster b' , so as to allow of the removal and

replacement of the said jacket A, as occasion may require. The upper end of the jacket A is provided with two guards, $a^2 a^2$, each of which projects about a quarter of an inch above the said upper end, and when the jacket is applied above the upper end of the wick-tube B, as seen in Fig. 1.

It will be seen that the jacket A produces a roomy chamber around the wick-tube P, while its exterior slopes gradually upward on two sides into contact with each of the two broader sides of the upper end of the wick-tube, the two flame-guards $a^2 a^2$ being in contact with and projecting above the two narrower sides of the same, as seen in the drawings.

In operation the jacket A serves to produce a capacious chamber around the lengthy wick-tube B, and thus prepares the oil absorbed by the wick for a more ready combustion as it reaches the upper end of the latter, while the sloping, broad sides of the said jacket give an upward tendency or direction to the air coming into contact with the flame, thus effecting the combustion of the oil in a more favorable manner for producing a smokeless light. The guards $a^2 a^2$ protect, in an effective manner, the two thinner, and therefore more easily extinguishable, portions of the flame against currents of air produced by carrying the ignited lamp about, or otherwise.

Having thus fully described my improvement and pointed out its utility, what I claim as new therein of my invention, and desire to secure by Letters Patent, is—

1. Surrounding the wick-tube B with a tapering jacket, A, fitting closely around the upper orifice of the said tube, substantially in the manner described and set forth, for the purposes specified.

2. In combination with the said jacket A, the two projecting guards $a^2 a^2$, the same being constructed and arranged substantially as set forth, for the purpose specified.

ANNA C. WILHELM.

Witnesses:

BENJ. MORRISON,
JOS. NEUMANN.

E. Hill.

Bonnet.

N^o 48867

Patented Jul. 18, 1865.

Fig. 4.

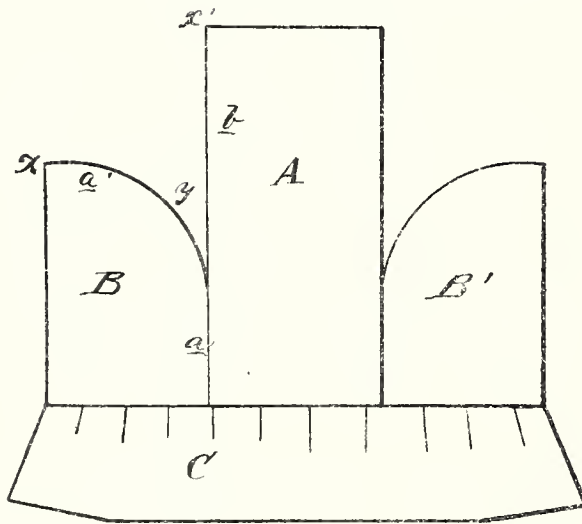


Fig. 3.

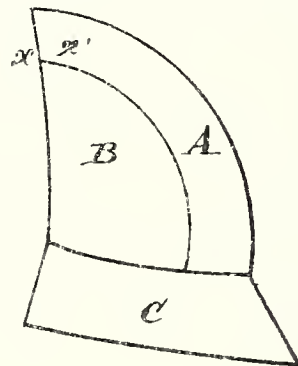


Fig. 1.

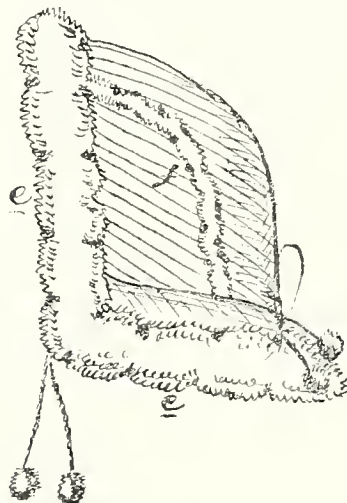
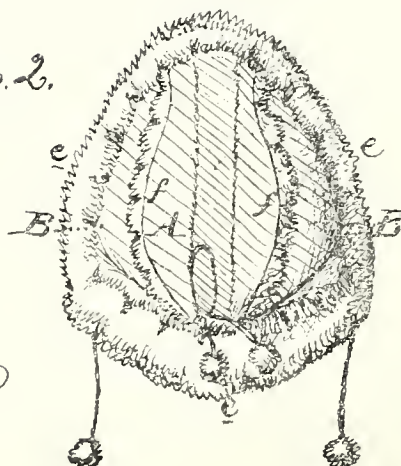


Fig. 2.



Witnesses

Wm. Westcott
Jr. Parker

Inventor

Emma Hill
By her Atty
J. H. Howsley

UNITED STATES PATENT OFFICE.

EMMA HILL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
THOMAS DOLAN, OF SAME PLACE.

IMPROVEMENT IN LADIES' HOODS.

Specification forming part of Letters Patent No. 48,867, dated July 18, 1865.

To all whom it may concern:

Be it known that I, EMMA HILL, of Philadelphia, Pennsylvania, have invented an Improvement in Ladies' Hoods; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a lady's hood composed of four pieces of knitted or woven fabric formed, arranged, and stitched together, substantially as described hereinafter, so that the hood may be more full at the rear, require less waste of material in cutting, and present a neater appearance than ordinary hoods.

In order to enable others to make my invention, I will now proceed to describe the manner of constructing the same.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a side view of my improved hood; Fig. 2, a rear view, and Figs. 3 and 4 diagrams illustrating my invention.

Similar letters refer to similar parts throughout the several views.

The body of my improved hood is made of four pieces, A, B, B', and C, of knitted or woven fabric, and of the form, or approximating to the form, represented in Fig. 4. The two pieces B and B' are, in the first instance, stitched to the piece A, the edge *b* of the latter piece being stitched to the edge *a*, rounded portion *y*, and edge *a'* of the piece B, so that the corner *x* of the last-named piece shall coincide with the corner *x'* of the piece A, the piece B' being stitched to the piece A in a similar manner, when the three pieces will have assumed a shape adapted to that of the wearer's head. The lower edges of the pieces A, B, and B' are now stitched to the upper

edge of the piece C, which is puckered, and which, forming the cape, completes the body of the hood. A fancy border, *e*, of any desired pattern is now stitched to the front edges of the hood and to the edge of the cape, and any suitable ornamental trimming, *f*, may be stitched over the line of junction of the pieces A, B, and B', the hood being complete after the addition of suitable strings and tassels and such other ornaments as the taste of the designer may suggest.

Hoods manufactured in accordance with the above-described mode require less waste in cutting the fabric, present a neater appearance than ordinary hoods, and being more full at the back than the latter more readily accommodate themselves to the masses or folds of hair usually worn by ladies.

I desire it to be understood that I do not claim a mere arbitrary arrangement of the lines or pattern on account of the economy of material, for I am aware that it is a common right to utilize the material to the best advantage by such means; but, having combined with such economical arrangement a principle of construction by means of which the most advantageous and graceful form has been attained,

I claim as my invention and desire to secure by Letters Patent—

A lady's hood composed of the four pieces A, B, B', and C, formed, arranged, and stitched together substantially in the manner described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EMMA HILL.

Witnesses:

HENRY HOWSON,
W. J. R. DELANY.

S. E. Cook.

Imitation Hair Braid.

N^o 54116

Patented Apr. 24. 1866

Fig. 2.

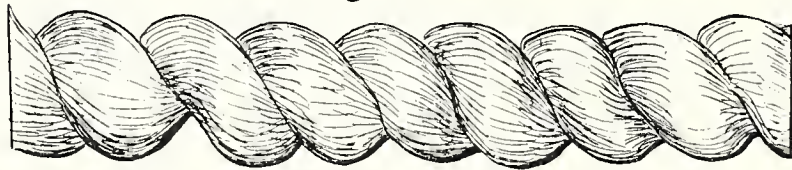


Fig. 1.

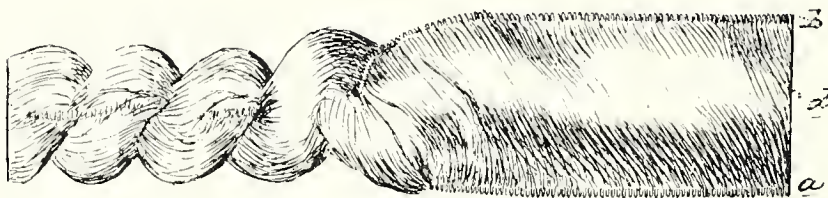
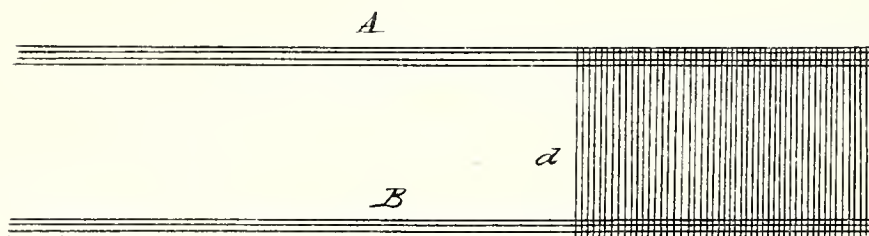


Fig. 3.



Inventor:

S. E. Cook

By her attorney

J. P. Howson

Witnesses:

Wm. Albert Steel
John Parker

UNITED STATES PATENT OFFICE.

SARAH E. COOK, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN IMITATION OF BRAIDED HUMAN HAIR.

Specification forming part of Letters Patent No. **54,116**, dated April 24, 1866.

To all whom it may concern:

Be it known that I, SARAH E. COOK, of Philadelphia, Pennsylvania, have invented an Imitation of and Substitute for Coils and Folds of Human Hair; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a fabric woven and twisted in the manner described hereinafter, so as to imitate folds and coils of human hair.

In order to enable others to make my invention, I will now proceed to describe the manner of carrying it into effect.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 represents the fabric, partly twisted, of which my imitation of and substitute for coils and folds of human hair is made; Fig. 2, the fabric twisted into a spiral form, and Fig. 3 a diagram illustrating my invention.

The fabric is made in an ordinary loom, such as is used for making coach-lace, &c., there being two sets of warp-threads, A and B, Fig. 3, situated a suitable distance apart from each other.

The weft consists of a number of strands of silk passed across the warp-threads and interwoven with the same at the opposite edges.

The fabric thus produced consists of two opposite woven edges, *a* and *b*, Fig. 1, with intervening transverse and unwoven threads *d*. On twisting the fabric into the spiral form shown in Fig. 2, the woven edges are concealed or nearly concealed in the spiral coils, which become prominent, and represent coils or folds of human hair, the imitation being the more perfect on account of the threads, after being twisted, becoming separated at intervals, precisely as human hair does on being formed into coils or folds.

After the fabric has been thus twisted it may be formed into what are termed "puffs," to be worn on the back of the head by ladies; or other ornamental devices may be made of the twisted fabric to imitate folds or coils of human hair.

I claim as my invention and desire to secure by Letters Patent—

A fabric woven at its edges and twisted spirally, in the manner described, so as to produce an imitation of braided human hair.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SARAH E. COOK.

Witnesses:

C. B. PRICE,

CHARLES E. FOSTER.

UNITED STATES PATENT OFFICE.

MARGARET RICHARDSON, OF NORRISTOWN, PENNSYLVANIA.

IMPROVED MEDICAL COMPOUND.

Specification forming part of Letters Patent No. **55,160**, dated May 29, 1866.

To all whom it may concern:

Be it known that I, MARGARET RICHARDSON, M. D., of Norristown, in Montgomery county, State of Pennsylvania, have invented a new and useful Medicine for the Cure of Cholera and other Bowel Complaints; and I do hereby declare the following is a full, clear, and exact description thereof.

To enable others skilled in the art to make and use my invention, I will proceed to describe its composition.

The medicine is made of a mixture of the following ingredients in certain proportions, and is used for the cure of cholera, bowel complaint, dysentery, cholera-morbus, and summer complaint: tinct. opii, f. 3 vi; tinct. camphoræ, f. 3 vi; tinct. olei menthæ piperita, f. 3 vi; tinct. rhei, f. 3 iv; tinct. zingiberis, f. 3 vi; tinct. kino, f. 3 ii; tinct. capsici, f. 3 ii.

The same ingredients may be expressed in

common English terms thus: tincture of opium, six drams; tincture of camphor, six drams; tincture of peppermint, six drams; tincture of ginger, six drams; tincture of rhubarb, four drams; tincture of kino, two drams; tincture of capsicum, two drams.

A dose of the above mixture for an adult is from half a tea-spoonful to a tea-spoonful every hour until the complaint is checked.

What I claim as my invention, and desire to secure by Letters Patent, is—

A medicine for the cure of cholera and other bowel complaints, made of the ingredients herein described, and in about the proportions specified.

MARGARET RICHARDSON, M. D.

Witnesses:

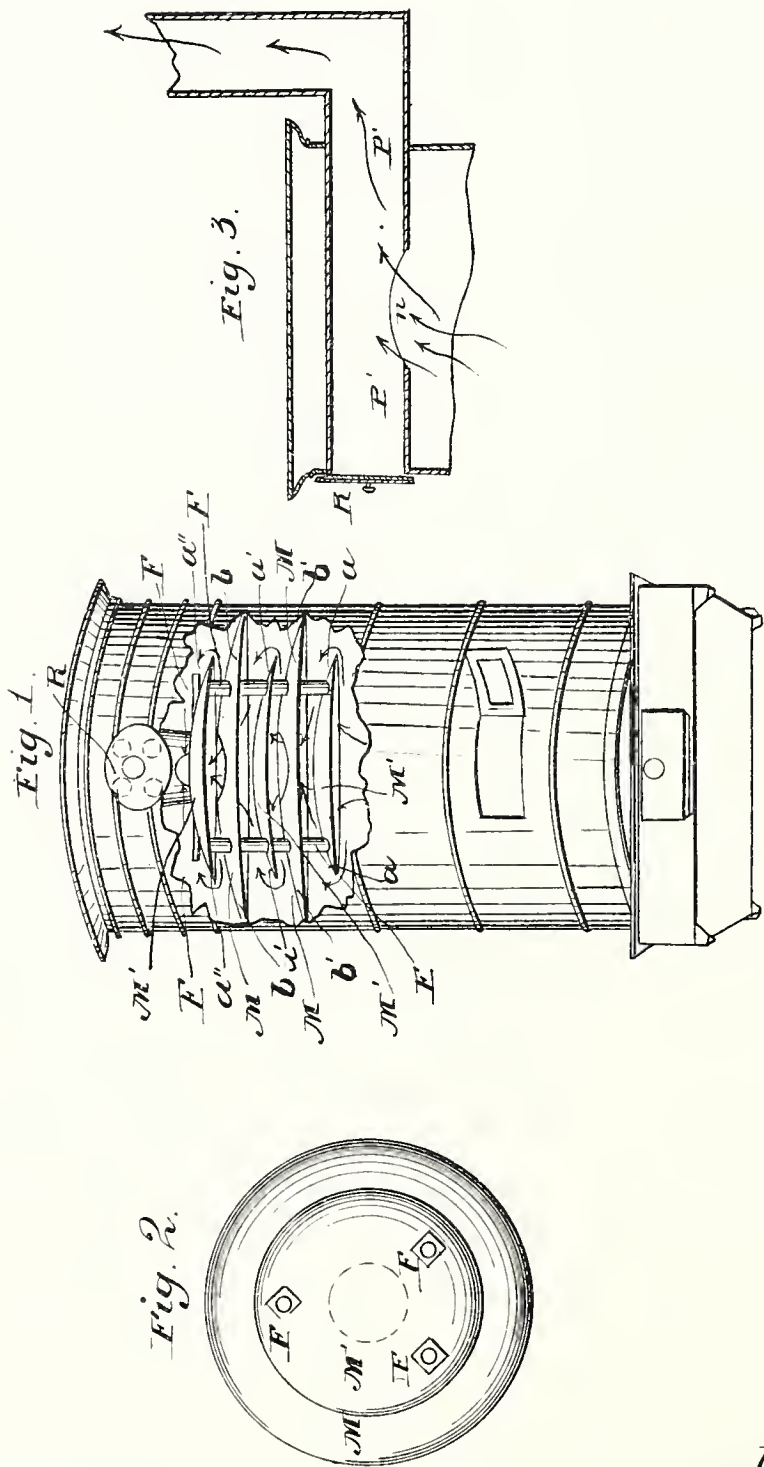
L. E. CORSON,
CARROLL S. TYSON.

CONVER & BORTHWICK.

Heat Radiator.

No. 57,481.

Patented Aug. 28, 1866.



Witnesses:
Ed. Collins
J. & Collins

Inventors:
Elsie Conner
John Borthwick

UNITED STATES PATENT OFFICE.

JESSIE CONVER AND JOHN BORTHWICK, OF PHILADELPHIA, PA.

HEAT-RADIATOR.

Specification forming part of Letters Patent No. 57,481, dated August 28, 1866.

To all whom it may concern:

Be it known that we, JESSIE CONVER and JOHN BORTHWICK, both of the city of Philadelphia, in the county of Philadelphia, in the State of Pennsylvania, have invented a new and Improved Mode of Radiating the Heat in all Heating Apparatus; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a perspective view of a stove with our heat-radiator and heat-cylinder set in. Fig. 2 is a top view of the heat-radiator. Fig. 3 is a sectional longitudinal view of the heat-cylinder.

The nature of our joint invention consists in an apparatus composed of reverberating metallic disks disposed and held together by bolts running through them all, forming a whole which, placed into a stove or any other heating apparatus, will stop the heat from escaping too fast through the smoke-pipe; and also in a heat-cylinder fixed on the top of the above-mentioned heat-radiator, so as to direct and control the heat at will.

To enable others skilled in the art to make and use our joint invention, we will proceed to describe its construction and operation, similar letters referring to similar parts in the annexed drawings.

We cut from any suitable metal three or more disks, M, of a size to fit exactly that of the stove or any other heating apparatus it is to be applied to. We give said disks a several inches concave shape, and we punch a hole through them of about two-thirds of the radius of the disk or diameter. We then cut a similar number plus one of metallic disks, M', of a smaller diameter, and to which we give the same concavity as above. Our disks thus prepared, we fix them by means of bolts F F, running through them all, as shown in Fig. 1, so that their convexity be uppermost, and alternating the disks M' and M, so that the small one be at the top and bottom of the apparatus. Thus finished and held together, the radiator is introduced into the stove, as in Fig. 1.

The stove-pipe or smoke-pipe should have its inside mouth a few inches above the top disk, and then a cylinder, P', of a size to fit on smoke-pipe, is fixed to run all through the top of the stove P P, Fig. 3, from smoke-pipe to the outside of the stove over the fire-grate.

Said cylinder is provided with a circular hole, n, corresponding vertically and in diameter with that punched through the larger disks, M. A register, R, is fixed on the outside end of cylinder P'.

Now the heat rising in the stove is stopped by disk a, around which, pressing and radiating, as shown by arrows C, it reaches disk a', goes through hole c, presses and radiates around disk a'', and so on from disk to disk, until reaching hole n in cylinder P', whence it reaches the smoke-pipe slowly if the register R is shut, rapidly if it is open.

It is obvious that the heat forced to radiate in the upper part of the stove shall impart more caloric than when allowed to reach the stove-pipe at once. Our apparatus, the radiator, is therefore a fuel-saving one.

Again, the cylinder P' being in direct contact with the heat directs it surely and almost at will, enabling by a wise management of its register n to keep it in the stove or accelerate its rapid egress into the smoke-pipe.

We are aware that a patent for a damper composed of metallic disks has been already granted to A. E. Elmer in 1865, and we want it distinctly understood that we do not claim the metallic disks as our invention. Elmer's object, as appears from his specification, is to regulate the draft at will, and he places his damper in the smoke-pipe of his stove. We do not regulate the draft at all with our heat-radiator. We force the heat to radiate before it leaves the stove, and our heat-radiator is permanent, and cannot, as Elmer's damper, be open or shut at will.

Having thus described our invention, what we claim as our joint invention, and desire to secure by Letters Patent of the United States, is—

1. The heat-radiator composed of metallic disks permanently attached together and combined with the body or fire-place of any stove, or any device or devices substantially the same, for the purpose and in the manner above described.

2. The combination of our heat-radiator with cylinder P', for the purpose and in the manner aforesaid described.

JESSIE CONVER.
JOHN BORTHWICK.

Witnesses:

C. D. COLLADAY,
C. T. COLLADAY.

United States Patent Office.

ANN LOOSLEY, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 62,650, dated March 5, 1867.

IMPROVED MEDICINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ANN LOOSLEY, of Philadelphia, in the county of Philadelphia, and State of Pennsylvania, have invented a new Composition of Matter or Medicine for the Cure of Whooping-Cough, which I assert to be an infallible remedy for that distressing disease; and I do hereby declare that the following is a full and exact description thereof.

The nature of my invention consists in the preparation of a composition of matter or medicine for the cure of whooping-cough, composed of the following ingredients, viz, West India sirup, pulverized rosin, and tincture of wild cherry bark, in the following proportions: Three teaspoonfuls of West India sirup, one teaspoonful of pulverized rosin, and ten drops of tincture of wild cherry bark, to be thoroughly mixed together. Dose—one teaspoonful immediately after every fit of coughing.

Said West India sirup being also known as West India molasses, made from sugar cane, and of which it is a better quality, and which can be procured in Philadelphia, and I presume elsewhere, at any respectable grocery.

What I claim as my invention, and desire to procure by Letters Patent, is—

The combination of the said ingredients in the said proportions, thereby producing the said medicine, and which I propose to manufacture and sell as “Loosley’s Infallible Cure for Whooping-Cough.”

ANN LOOSLEY.

Witnesses:

J. P. DELANY,

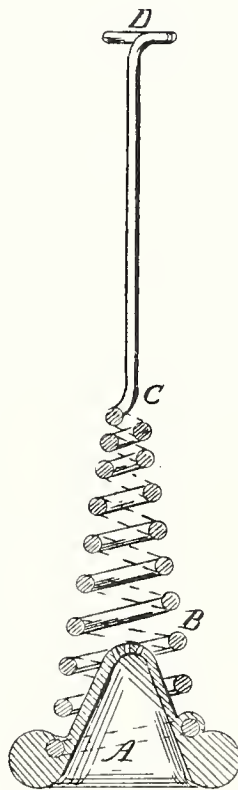
PHILIP J. TAYLOR.

PATENTED

DEC 3 1867

Mrs. E. T. Brigham's Pessary.

71692



Witnesses,
Theo Inseke
And B Miles

Inventor.
E. T. Brigham
Per
Munn & Co.
Attorneys

UNITED STATES PATENT OFFICE.

EMELINE T. BRIGHAM, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED PESSARY.

Specification forming part of Letters Patent No. **71,692**, dated December 3, 1867.

To all whom it may concern:

Be it known that I, EMELINE T. BRIGHAM, of Philadelphia, Philadelphia county, Pennsylvania, have invented a new and Improved Pessary or Support for the Uterus; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

The present invention relates to a pessary or support to be used as a support and covering to the mouth and neck of the uterus in cases of female weakness, falling of the womb, and other affections of the same; and the invention consists in combining with a pessary, which may be made of india-rubber or any other suitable material, of the proper shape, a coiled, spiral, or other suitable-shaped spring-support, of a length sufficient to pass through and out of the mouth of the vagina, where, at its outer end, it is secured to the person by straps or other suitable fastening or holding means or devices.

The object of the spring-support is to hold the pessary against and about the mouth and neck of the uterus, and thus to support the same, the spring shape causing it to produce an elastic support thereto, and one most comfortable and easy to the wearer.

In the accompanying plate of drawings my improved pessary and support to the uterus is illustrated, the figure being a central vertical section through the pessary and its supporting attachment.

A in the drawings represents a pessary made of india-rubber or any other suitable material, and of the proper shape to fit about and around

the neck and mouth of the uterus; B, a coiled or spiral spring, made in the form of a cone from end to end. This spring, at its larger end, is secured to the pessary, and at its smaller end terminates in a straight wire or cord, C, of suitable length to pass and extend out through the mouth of the vagina, where, at such end, it is provided with a ring, D, to receive one or more straps for fastening the same to the person.

By means of the coiled spring, when the pessary is worn, it is not only held in its position against the mouth and neck of the uterus, thus acting as a support thereto, but, as the said support is made of a spring form, an elastic, yielding, and pliant support, as it were, is given to the uterus, whereby the pessary, when worn, is rendered not only exceedingly comfortable and easy to the person, but can the more perfectly and readily adjust itself to whatever position the person may at any time occupy in walking, sitting, or riding.

The spring-support, in lieu of being made of a coiled or spiral shape, may be made of other forms, and its attachment to the pessary may be such as to render it susceptible of ready attachment and detachment therefrom, for replacing it with a new one when desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

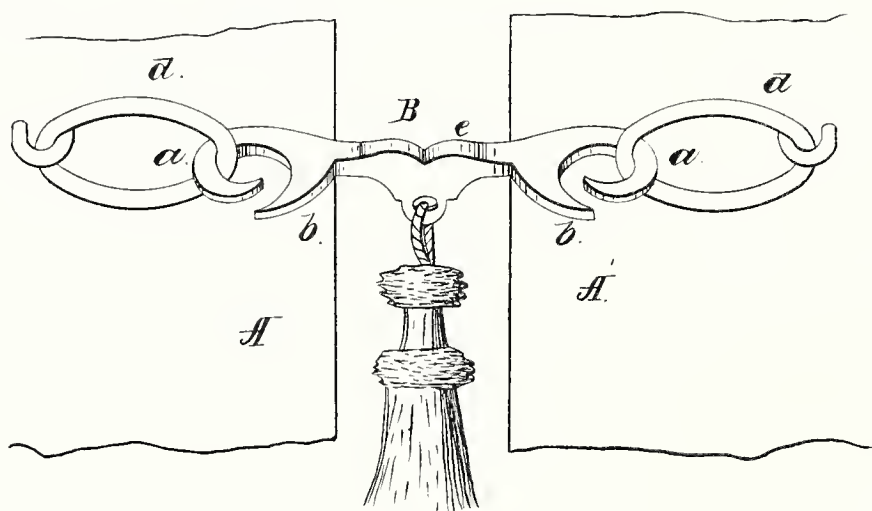
The pessary A, conical spiral spring B, with wire C, having ring D, constructed and arranged to operate as and for the purpose specified.

EMELINE T. BRIGHAM.

Witnesses:

ALBERT W. BROWN,
WM. F. McNAMARA.

M. Thomas,
Shutter Bower.
N^o 70,651. Patented Nov. 5, 1867.



Witnesses:
Wm Albert Steel
John Parker.

Inventor:
M. Thomas.
By his Attys
J. H. Howes



MARTHA THOMAS, OF LOWER MERION, PENNSYLVANIA.

Letters Patent No. 70,651, dated November 5, 1867.

IMPROVED RETAINING-LINK FOR SHUTTERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, MARTHA THOMAS, of Lower Merion, county of Montgomery, State of Pennsylvania, have invented a Retaining-Link for Shutters; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of a retaining-link, of the peculiar construction fully described hereafter, for limiting the outward movement of shutters, and maintaining a hold of the rings of the shutters when the latter are agitated by the wind.

In order to enable others to make and apply my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which the figure represents my invention in perspective.

A and A' are portions of two shutters opened to a limited extent, and retained by a link, B, of the peculiar character shown. Each end of this link is provided with two hooks, *a* and *b*, the point of one of which projects beyond that of the other, there being just space sufficient between them to permit the usual shutter-ring *d* to be introduced into the hook *a*, as shown in the drawing. The connecting strip *e*, between the opposite ends of the link, may be made plain or ornamental, as desired, and may be furnished with a tassel, as shown. While the hooks *a* of the above-described link effectually limit the outward movement of the shutters, the hooks *b* prevent the escape of the rings *d* from their hold on the link should the shutters be agitated by the wind.

I claim as my invention, and desire to secure by Letters Patent—

The within-described retaining-link, composed of a strip, *e*, of metal, with hooks *a* and *b* arranged at each end, as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARTHA THOMAS.

Witnesses:

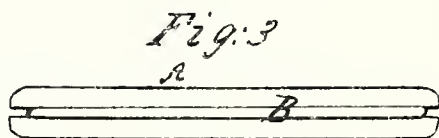
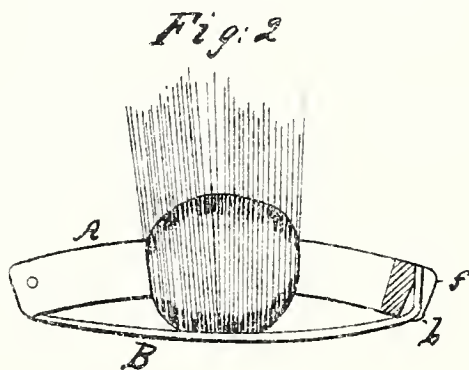
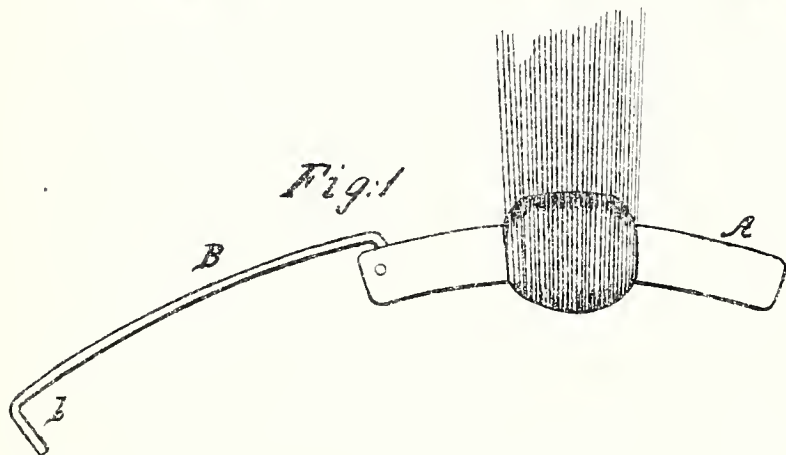
JOHN WHITE,

W. J. R. DELANY.

S. A. Early.
Hair Curler.

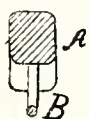
N^o 66476

Patented Jul. 9. 1867.



Witnesses
Wm. Albert Steel
John Parker.

Fig. 4



Inventor.

S. A. Early
By her Atty
H. Howson

United States Patent Office.

SALLIE ANN EARLY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
SAMUEL R. NAGEL, OF THE SAME PLACE.

Letters Patent No. 66,476, dated July 9, 1867.

IMPROVEMENT IN HAIR-CURLERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SALLIE ANN EARLY, of Philadelphia, Pennsylvania, have invented a Hair-Curler; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of a curved bar, of wood or other light material, and a retaining-wire, hinged to one end of the bar, and having a bent end fitted to a slot in the opposite end of the same, all substantially as described hereafter, the whole forming a cheap, simple, and light hair-curler, which accommodates itself to the wearer's head, and which is less prominent and much more comfortable than an ordinary curl-paper.

In order to enable others to make and use my invention, I will now proceed to describe the mode of constructing and using the same, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a front view of my improved hair-curler.

Figure 2, the same, partly in section, with the retaining-wire closed.

Figure 3, an edge view; and

Figure 4, a transverse section.

A is a curved bar of wood or other light material, and is rounded at the four corners, as illustrated in the transverse section, fig. 4. To one end of this curved bar is hinged a wire, B; the bent end *b* of which is arranged to fit snugly and somewhat tightly in, but so as to be withdrawn by a slight effort from a slot, *f*, in the opposite end of the bar A.

In using the implement the retaining-wire B is first moved back to the position seen in fig. 1, when a lock of hair, D, is twisted round the bar by turning the latter between the fingers and thumbs of both hands. When the lock of hair has been coiled to the desired extent round the bar the retaining-wire B is moved to the position shown in fig. 2, the body of the wire bearing against the coil, and its bent end being pressed into the slot at the outer end of the bar, thereby confining the coil.

The object of curving the bar is that there may be between its concave edge and the straight or slightly bent retaining-wire an opening sufficient to admit the coil of hair, and the size of this opening may be increased or diminished at pleasure by bending the body of the wire inwards or outwards.

One of the advantages of the implement is that while it effectually retains the hair in its coiled condition it accommodates itself to the wearer's head, and is less prominent and much less unsightly than an ordinary curl-paper. Another advantage is that the coil of hair can be released from the instrument by simply throwing back the wire and turning the bar, or permitting the hair to uncoil itself.

I claim as my invention, and desire to secure by Letters Patent—

The within-described hair-curler, composed of the curved bar A, of wood or other light material, and the retaining-wire B, hinged to one end of the said bar, and having a bent end fitted to a slot in the opposite end of the bar, all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SALLIE ANN EARLY.

Witnesses:

H. HOWSON,

JOHN WHITE.

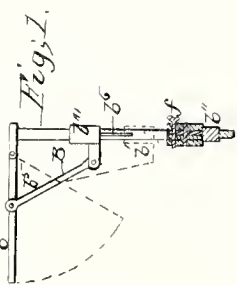
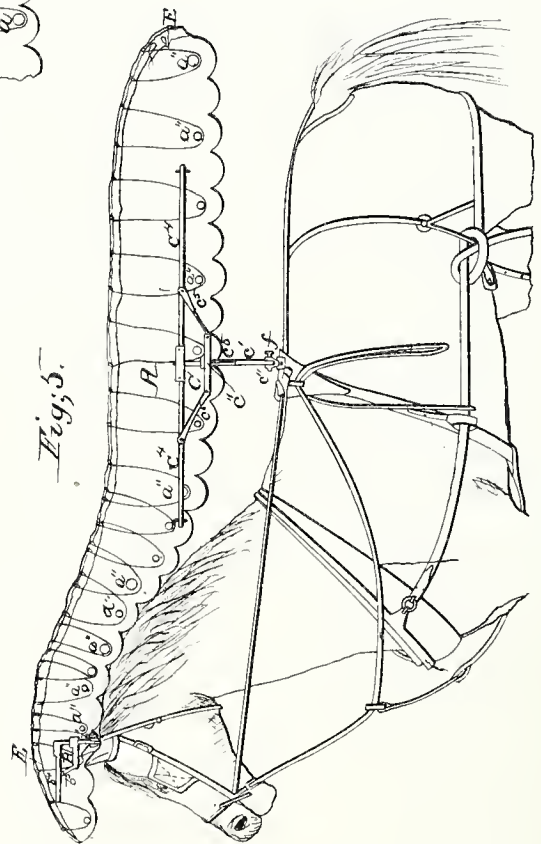
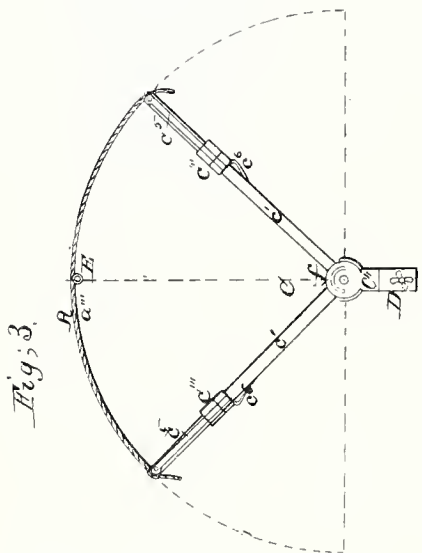
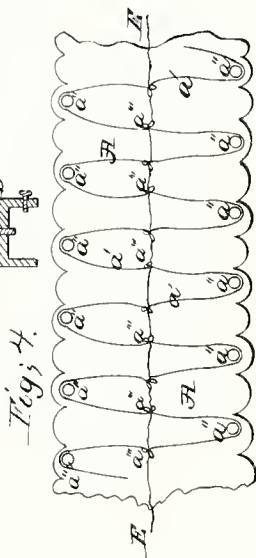
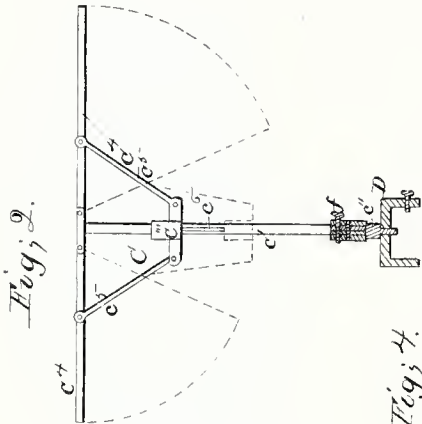


S. Ruth,

Horse Bonnet,

N^o 81,412.

Patented Aug. 25, 1868.



Witnesses;
Wm. H. Morrison

Inventor,
Sarah Ruth

United States Patent Office.

SARAH RUTH, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 81,412, dated August 25, 1868.

IMPROVEMENT IN SUN-SHADE FOR HORSES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SARAH RUTH, of the city of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in the Sun-Shade for Horses and other draught-animals in harness; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a section of the supporting-frame of the forward or head-end of the canopy thereof.

Figure 2, a section of the supporting-frame of the main portion of the canopy.

Figure 3, a front view of the entire supporting-frame of the main portion of the canopy, with the latter applied thereto.

Figure 4, a sectional plan view of the under side of the canopy, and

Figure 5 a central longitudinal section of the entire shade as applied over the animal—

Like letters of reference indicating the same parts when in the different figures.

The object of my improvement is to afford better protection to horses, mules, and other draught-animals attached to drays, carts, &c., from either the vertical or oblique rays of the sun in hot weather, without preventing a free and open circulation of air between the said protector and the animal.

My invention consists of a canopy and articulated adjustable supporting-frames, constructed, applied, and operated substantially in the manner hereinafter set forth and specified.

Referring to the drawings, A is the canopy, and B and C its supporting-frames.

The canopy, A, consists of coarse bleached linen or cotton fabric, or any other suitable material, of sufficient length and breadth to shade the whole animal when applied, and has fixed to its under side a steel wire, *a'*, which extends from the head-end in a zigzag manner from side to side thereof, to the rear end of the same, the turns *a''* in the zigzagged wire being bent into one or two coils, so as to allow a more free and easy contraction and expansion of the canopy, as the movement of the animal's head up and down and the length of his back and neck may require, (see figs. 4 and 5,) and also one or two coils being made in the middle of the several crossing parts of the said wire, to give increased spring to the latter, and thus facilitate in producing and varying the curved form required in the canopy A from side to side, (see fig. 3.)

An elastic cord, E, is fixed to the head-end of the canopy, and, passing through the coils *a'''* to the rear end, enables the driver to contract the canopy A to suit the animal, and, when tied, to retain the adjustment, and at the same time to allow the animal to move his head up and down without displacing thereby the said canopy or its supporting-frames B C.

The supporting-frames B and C, each consist of two arms, *b' b'* and *c' c'*, jointed to the respective stems *b'' c''*, whereby they are adjustably supported in respective blocks D D, permanently attached to any suitable part of the harness. The joints just specified allow the said arms *b'* and *c'* to be adjusted near together at their upper ends, or further apart, to suit the width of the canopy A, and also to be turned over together, either to the right or to the left, to protect the animal from the oblique rays of the sun, (see the dotted lines in fig. 3.)

The said arms are held firmly in the different positions mentioned, by means of a clamping-screw, *f*, in the stem-piece *c''*, which, passing through curved slots (see fig. 3) in the adjoining arms *c' c'*, and compressing the two together when the nut is screwed up tightly.

Each of the arms of the frame C is provided with a slide, *c'''*, which is connected to two transverse arms, *c⁴ c⁴*, (that are jointed to the upper end of the main arm *c'*,) by means of two diagonally-arranged pieces, *c⁵ c⁵*, which are jointed to the slide *c'''* and to the arms *c⁴ c⁴*, so that the said arms *c⁴* can be readily raised up to an aligned or horizontal position, or be as readily brought down toward the main arm *c'*, as indicated by the dotted lines in fig. 2, the said aligned position being retained by means of a snap-spring, *c⁶*, in the arm *c'*, which acts like an umbrella-spring under the said slide.

The supporting-frame B is constructed and operates precisely like the frame C, except that it has but one horizontal arm *b⁴*, the elastic cord E being sufficient to support the neck-portion of the canopy A.

The canopy A is attached to the frames B and C by means of buttons or hooks and eyes.

Both of the frames B and C are intended to be made of metal.

The application of this protection to the animal will be fully understood by reference to fig. 5, and its mode of adjustment and operation, by what has been already stated, and by reference to the drawings. It may be properly added, however, that the whole protection is light in weight, inexpensive in construction, easily applied and adjusted, effectually protects the animal from the sun, without preventing a free circulation of air between him and the canopy, and can at any time be readily removed and rolled up into a small package without injuring any of its parts.

Having thus fully described my improved sun-shade for draught-animals in harness, what I claim as new therein of my invention, and desire to secure by Letters Patent, is confined to the following, viz:

I claim the canopy A, and the supporting-frames B and C, the said parts being constructed, applied, and operated substantially as and for the purpose set forth and described.

SARAH RUTH.

Witnesses:

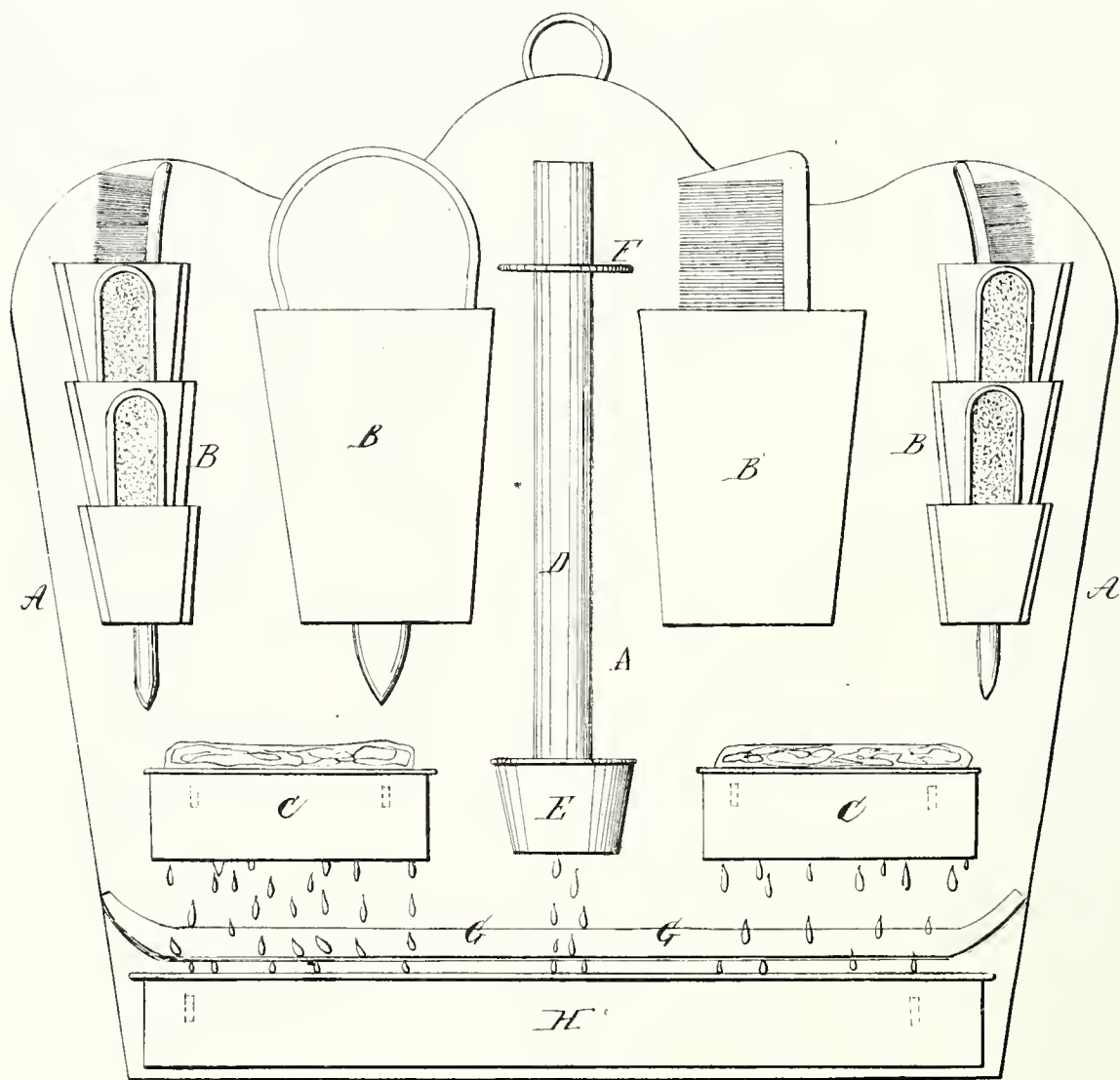
BENJ. MORISON,
WM. H. MORISON.

M. A. H. Saurman,

Brush Rack,

N^o 83,884,

Patented Nov. 10, 1868.



Witnesses
Phil D. Larnier
Geo. W. Rithwell

Inventor
Mary Ann H. Saurman
by H. H. H. Saurman & Co.
Attys



MRS. MARY ANN H. SAURMAN, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 83,884, dated November 10, 1868.

IMPROVED BATH-ROOM RACK.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, MRS. MARY ANN H. SAURMAN, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Bath-Room Rack ; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains, to fully understand and use the same, reference being had to the accompanying drawings, making part of this specification, in which the figure is a front view of the device illustrating my invention, which invention consists in applying to a plate or support a series of receptacles for brushes, combs, soap, and other toilet-articles, so that the water which drops therefrom shall be directed to a place of deposit.

I produce a convenient and useful rack, which possesses several advantages, as will be hereinafter more fully described.

In the drawings, A represents a plate, constructed of any suitable material, by preference of tin, painted, japanned, or otherwise protected from the action of water, and ornamented as desired.

To the face of this plate I attach a series of receptacles, B, in which are placed the combs, the hair and tooth-brushes, and other toilet-articles.

It is necessary that these receptacles, excepting the one for the comb, should be open, or partly open, at the bottom, so that the water in the brushes may drip off.

C C are the soap-boxes, which are hung on the plate A, by means of hooks, or other fastenings, which will support the boxes in place, but allow their ready removal. Openings are made in these boxes, so that the water on the soap will run out therefrom.

The bath-tub pipe or plug, when removed from the tub D, is to be placed on a cup, E, secured to the plate.

Its upper end is prevented from falling outward by means of a ring, F, likewise secured to the plate.

G represents a ledge, which is secured to the plate near its lower end, and projecting sufficiently forward to cause the water dripping from the receptacles and boxes above it to fall on said ledge, and thereby be directed to a receptacle or pan, H, below it. This receptacle is removable from plate A, in order to pour out or remove the water collected therein.

It will be seen that the boxes, cups, and receptacles are so arranged on the plate that all of the drip-water will be directed to the pan H.

The ledge G prevents the water from running down behind this pan, whereby the wall is protected from water, as is evident without further explanation. All of the various receptacles, cups, and boxes may be detachable, if desired, in order to facilitate their cleansing, and also to form a compact bundle for transportation or removal.

The device is simple and practical, and is intended for the bath-room, and toilet-purposes generally, and should be hung up within convenient reach of the bath-tub, wash-basin, or any other suitable place.

Having thus described my invention,

What I claim as new herein, and desire to secure by Letters Patent, is—

A series of receptacles, for the purpose described, arranged and applied so that the water dripping from them will be conducted to a place of discharge, substantially as set forth.

To the above, I have signed my name, this 7th day of October, 1868.

MRS. MARY ANN H. SAURMAN;

Witnesses :

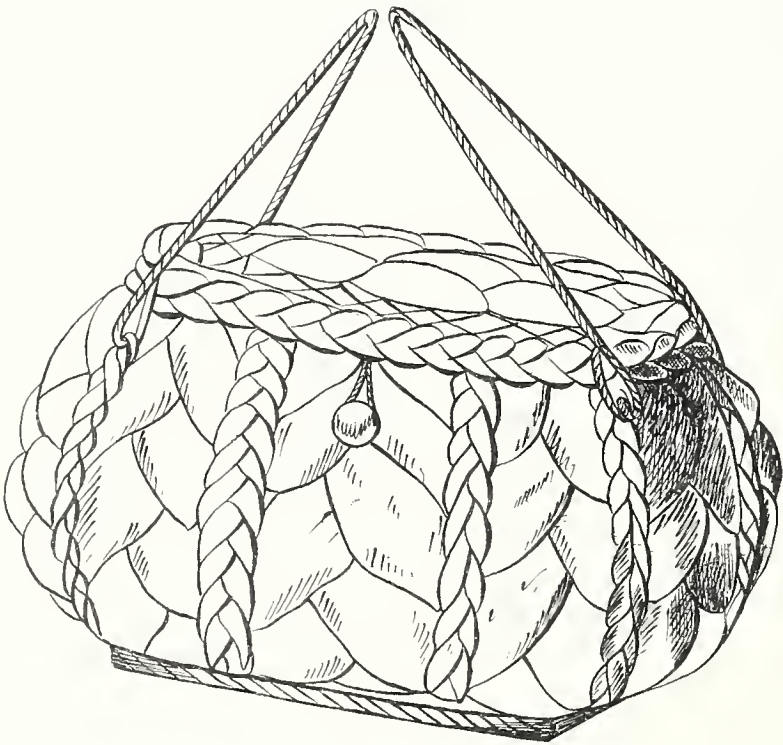
WM. A. WIEDERSHEIM,
J. W. HAMPTON, Jr.

S. P. P. Miller,

Basket,

Nº 77, 516,

Patented May 5, 1868.



Witnesses.

W. C. Ashkett,
Wm A Morgan.

Inventor.

S. P. P. Miller.

per Munn & Co.
attorneys.

United States Patent Office.

SARAH P. P. MILLER, OF BEAVER, PENNSYLVANIA.

Letters Patent No. 77,516, dated May 5, 1868.

IMPROVED BASKET.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SARAH P. P. MILLER, of Beaver, in the county of Beaver, and State of Pennsylvania, have invented a new and improved Cloth Water-Proof Basket; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and useful improvement in the material used and in the method of forming or manufacturing baskets for various purposes; and it consists in constructing the same of strips of cloth or "paper rags," braided or twisted together, shaped, painted, and varnished, as will be hereinafter described.

The drawing represents a basket formed according to my invention.

The cloth is torn or cut into strips, as for making carpet, or it may be in any form so that the pieces can be braided or twisted together. The braids or strands are sewed together in any form suitable for the desired shape of the basket.

After being thus sewed, the basket is stuffed with rags, moss, or any other material suitable for the purpose, to exactly the desired shape.

The outside is then sized with any suitable stiffening-substance, so that it will make the basket stiff enough to retain its shape after the stuffing is removed.

After the stuffing is removed, the inside is stiffened in the same manner with the sizing, when the basket is thoroughly dried.

The basket is then painted inside and outside with any suitable oil-paint, and of any desired color, after which it is varnished with coach-varnish, or other varnish suited to the purpose.

A basket made in this manner is both water-proof and durable, and as the principal materials are found in every household, the baskets may be produced at comparatively slight cost.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

As a new article of manufacture, a cloth basket, made of strips of cloth braided or twisted together, and coated with varnish or sizing inside and out, to preserve the form and render it water-proof, substantially as described.

SARAH P. P. MILLER.

Witnesses:

JOS. C. WILSON,

J. C. McKENZIE.



MARY FAUROT, OF SCRANTON, PENNSYLVANIA.

Letters Patent No. 87,036, dated February 16, 1869.

IMPROVED COMPOUND FOR REMOVING MILDEW FROM LINEN, &c.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, MARY FAUROT, of Scranton, in the county of Luzerne, and State of Pennsylvania, have invented certain new and useful Improvements in Compounds for Removing Mildew, &c., from Linen, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My invention relates to composition of matter, and consists in producing a new and useful compound for extracting or removing, from various fabrics, mildew, grass, or similar stains.

As is well known, linen, cotton, and various other fabrics often become mildewed from being exposed to the night air, or become stained from lying upon the grass. This not infrequently happens to clothing or other fabrics that are placed upon the grass, or hung out in the air to dry or bleach, and happen to be left out during the night.

To remove the mildew, grass, or similar stains from fabrics that are soiled by them, is the object of my invention.

In order to form my compound for extracting or removing these stains, I use chloride of lime, Ashton's salt, (being the finest quality of Liverpool salt,) and Madras indigo, and compound them in the following

proportions: One pound of chloride of lime, one-quarter pound of Ashton's salt, and one-quarter ounce of Madras indigo. These ingredients, I dissolve in four gallons of boiling water. When they are thoroughly dissolved, I let the mixture stand three hours, and then strain it, after which it is ready for use.

To extract or remove the mildew, grass, or similar stains from linen, cotton, or other fabrics, or from articles made from them, I apply my compound in the following manner:

For every three (3) pounds of the goods or fabric to be treated, I take three (3) table-spoonfuls of my compound and add to it one (1) quart of water, and soak the goods in the same for twelve (12) hours, then thoroughly wash them with soap and water in the usual way, and afterward dry them. When dry, all the mildew or stains will be gone, the goods will look as clean as when new, and can then be done up so as to look as bright and neat as if there had not been any mildew or stains of the kind mentioned upon them.

Having thus described my invention,

What I claim, is—

The composition, made of the ingredients substantially as herein described, and in the manner set forth, for removing or extracting mildew, grass, and similar stains from linen and like fabrics.

MARY FAUROT.

Witnesses:

BENJAMIN JAY,
C. W. ROESLER.



ELIZABETH MARY STIGALE, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 89,515, dated April 27, 1869.

METHOD OF PRESERVING FLOWERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ELIZABETH MARY STIGALE, of Philadelphia, Pennsylvania, have invented a Mode of Preserving Flowers; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists in the preservation of flowers from the effects of exposure, by preparing them as described hereafter, and confining them in air-tight cases.

In order to enable others to practise my invention, I will now proceed to describe the mode of carrying the same into effect.

Before describing my invention it will be necessary to remark that it has been a practice heretofore to subject flowers to such treatment that their beauty and freshness will be preserved for a time when they are not subjected to great exposure.

The flowers are taken gently apart, and the different pieces dried quickly in hot, fine sand, after removal from which the pieces are put together in their original relative position.

The flowers thus prepared retain their original brilliant colors and fresh appearance, but they fade, however, if subjected to exposure.

I have found, however, that if these sand-dried flow-

ers are confined within air-tight cases, they will retain all their fresh appearance, even if they are placed in the most exposed situations. Thus flowers, leaves, and grasses may after being prepared as described, be placed in a group in any suitable air-tight case, and exposed in a grave-yard during the most severe weather, and yet every flower and leaf will retain its original shape and beauty.

I am aware that flowers have been confined in air-tight cases with the view of preserving them; this, therefore, I do not claim, nor do I claim of itself the quick drying of flowers in hot sand; but

I claim as my invention, and desire to secure by Letters Patent—

The preservation of flowers from the effects of exposure, by preparing them as described, and confining them in air-tight cases as set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

E. M. STIGALE.

Witnesses:

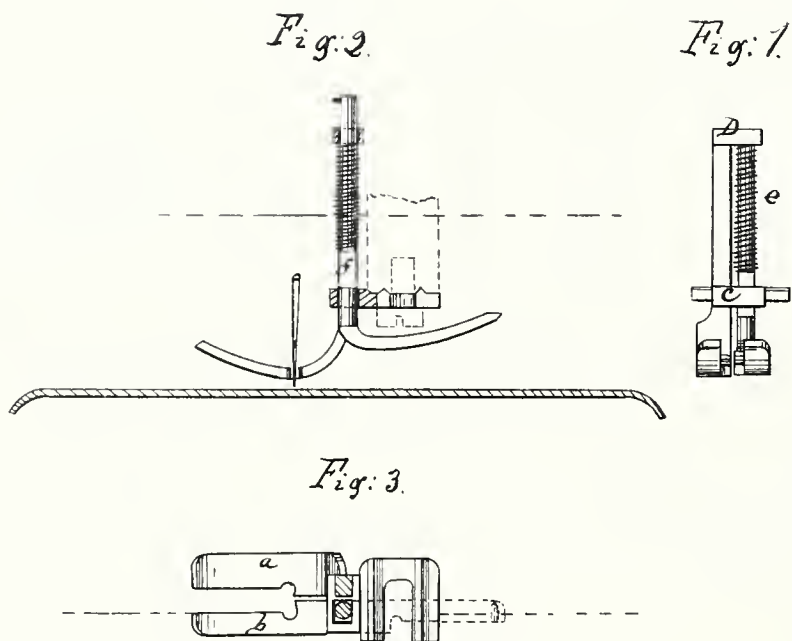
JOHN WHITE,
LOUIS BOSWELL.

S. TUTTON.

Presser Foot for Sewing Machines.

No. 89,957.

Patented May 11, 1869.



Witness

Chas. Vida.
John F. Brooks

Inventor

Sarah Tutton
Per Munn & Co

United States Patent Office.

SARA TUTTON, OF TUNKHANNOCK, PENNSYLVANIA.

Letters Patent No. 89,957, dated May 11, 1869.

IMPROVEMENT IN THE PRESSER-FOOT FOR SEWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, SARA TUTTON, of Tunkhannock, in the county of Wyoming, and State of Pennsylvania, have invented a new and improved Presser for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in pressers for sewing-machines, designed to provide an adjustable presser, better adapted for all kinds of work than any now in use.

It consists of a presser made in two parts, capable of employment together, as an ordinary presser, the parts being separated longitudinally through the centre, and one so arranged with an independent shank working vertically in brackets upon the other, that when required it may be raised up out of contact with the cloth, and turned back in the direction opposite to that of the working-position.

The attachment to the presser-support is such that the presser may be adjusted laterally.

Figure 1 represents a front elevation of my improved presser, when both parts are adjusted to the working-position;

Figure 2 represents a side elevation of the same, when the movable part is thrown out of action; and

Figure 3 represents a horizontal section.

Similar letters of reference indicate corresponding parts.

The presser is made in two parts, *a b*, each having separate shanks.

The shank of the part *a* is provided with brackets *c* and *d*, the bracket *c* serving as the means for connecting the whole to the presser-support of a sewing-machine, the said connection being so arranged that the device may be adjusted on the said support, so

that the needle may work in the centre between the two parts, or near to either side of the opening between the said two parts, *a* and *b*, of the foot.

To adapt the presser to some kinds of work requiring the removal of the part *b*, I arrange the shank of the part *b* to work free up and down in holes through the brackets *C D*, and provide a spiral spring, *e*, upon the shank, between the said brackets, to hold the said part *b* in the working-position.

The hole in the bracket *C* is made of angular form to receive the square portion of the shank, to prevent the same from turning when in a working-position.

Below the squared portion the shank is made round, so that it will turn freely in the hole when said shank is raised.

To adjust the part *b* to the position represented in fig. 2, it is raised, so as to pass the angular portion *f*, above the bracket, and turned around, as shown.

It will be maintained in the elevated position by the shoulders of the angular part, which does not fit the hole when the part *b* of the foot stands in this position, and the pressure of the spring will prevent it from turning.

My improved presser may be arranged for attachment to any sewing-machine.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

The combination, with the presser-foot *a*, of the presser *b f*, and the spring *e*, all constructed and arranged so that the part *b* may be turned away from the part *a*, substantially as specified.

The above specification of my invention, signed by me, this 23d day of February, 1869.

SARA TUTTON.

Witnesses:

FRANK BLOCKLEY,
ALEX. F. ROBERTS.

M. ARMSTRONG.
Cooking Stove.

No. 90,719.

Patented June 1, 1869.

Fig. 1

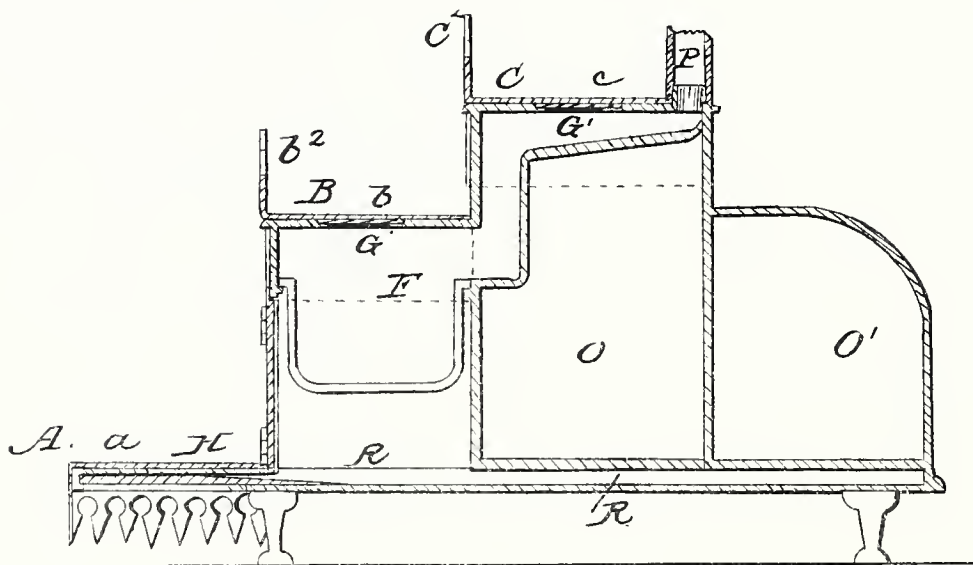
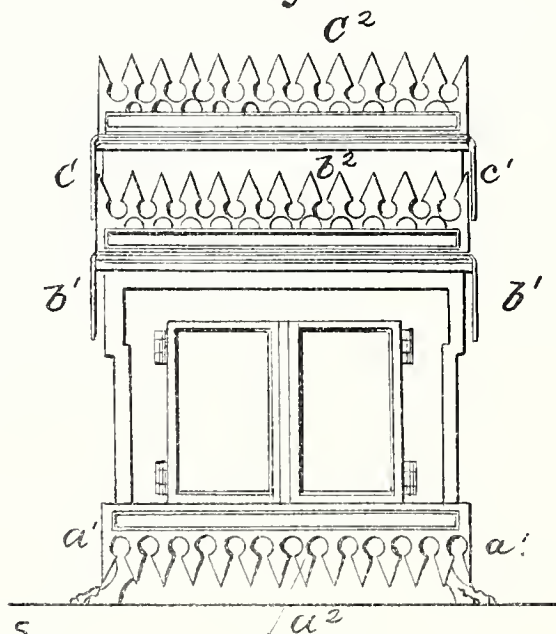


Fig. 2



witnesses
G. A. Pettit
S. H. Emerson.

Inventor
M. Armstrong
by M. H. Ho
attorneys

United States Patent Office.

MARGARET ARMSTRONG, OF WEST ALEXANDER, PENNSYLVANIA.

Letters Patent No. 90,719; dated June 1, 1869.

COOKING-STOVE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, MARGARET ARMSTRONG, of West Alexander, in the county of Washington, and State of Pennsylvania, have invented a new and improved Stove; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal vertical section.

Figure 2 is a front elevation.

The object of this invention is to provide, in connection with a cooking-stove of a certain pattern, an ornamental attachment, adapted, when in position, to conceal the griddles, and change the outward appearance of the stove, making it a handsome parlor-stove.

In the drawings—

F represents the fire-chamber;

O, the oven;

O', an extension of the oven on the rear side of the stove;

H, the hearth;

R, the ash-box, extending the whole length of the stove;

G G' G'', the griddles used in cooking; and

P, the smoke-pipe.

That part of the stove which contains the oven O is considerably higher than the rest, as seen in fig. 1.

The ash-box extends the whole length of the stove, from near the front edge of the hearth to the rear edge of the oven, and is provided with a valve, or slide *v*, through which the ashes can be removed when necessary.

The whole arrangement of the stove is such that its operation is exceedingly convenient and effective, giving large and commodious ovens, good draught, and great capacity for heating.

In connection with a stove thus constructed, I employ detachable ornamental pieces A B C, designed

and adapted to cover the horizontal top plate of the stove, which contain the griddles, and the vertical front or side plates which contain the doors.

The ornamental pieces are of cast-iron, with edges serrated or scalloped, and with ornamental mouldings to suit the taste. Each piece is adapted to cover and conceal both the flat part of the stove on which it rests, and so much of the sides and front below such part as it may be deemed best to conceal.

To this end, each piece is cast with a flat upper portion, *a*, *b*, or *c*, which rests upon the flat plate of the stove, a vertical flange, *a'*, *b'*, or *c'*, which projects downward from the front or end edge or front and end edges of the upper part, and conceals the doors, and if preferred, a vertical flange, *a'' b'' c''*, which projects upward from one or more of the edges of the piece *a*, *b*, or *c*, and serves as an ornament to the same.

When the stove is employed for cooking, these pieces are removed; when not, they are put in place on the stove, and cause it to present a very neat and ornamental appearance, adapting it for use as a parlor-stove.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The arrangement of the hearth H, fire-chamber F, large oven O, smaller rear extension O', pipe P, and ash-box R, extending from the front edge of the hearth to the rear edge of the small oven, as and for the purposes specified.

2. In connection with a stove, constructed substantially as herein described, the detachable ornamental pieces A B C, each having the flat part *a b c*, and the vertical flange or flanges *a' b' c'*, *a'' b'' c''*, substantially as and for the purpose specified.

MARGARET ARMSTRONG.

Witnesses:

J. F. MAYES,

JOS. K. SPRIGG.

M. Clyde, Umbrella.

No 96777.

Patented Nov 16, 1869.

Fig 1

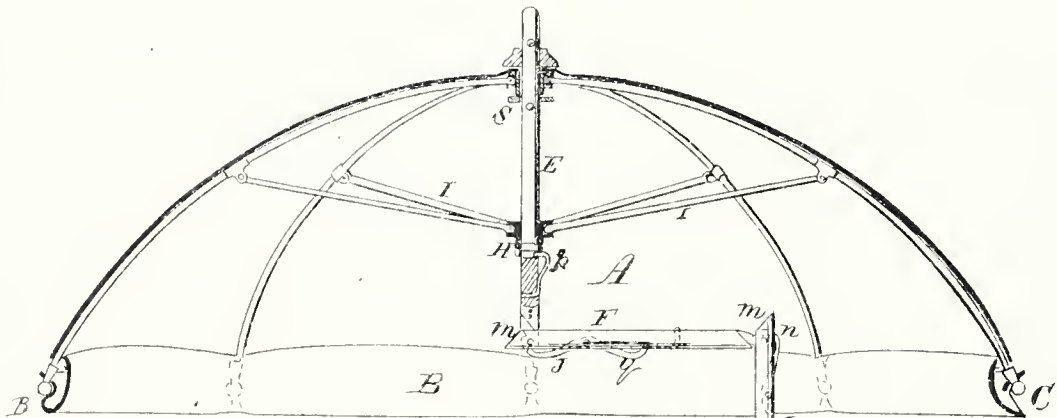


Fig 2.

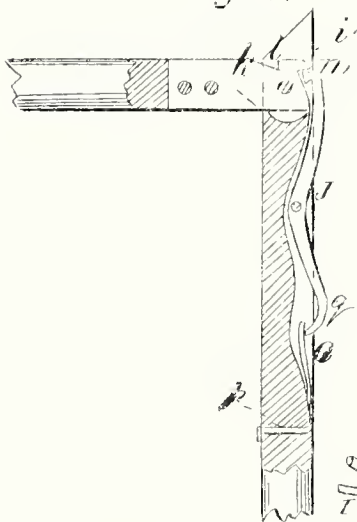
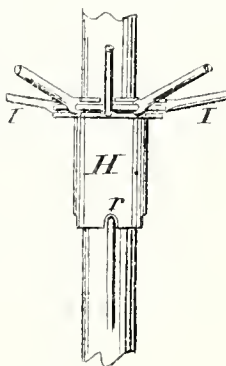


Fig 3.



Witnesses:

Winchman
Jno. H. Brooks

Inventor:

Miss Maggie Clyde

PER

M. Clyde
Attorneys.

United States Patent Office.

MAGGIE CLYDE, OF BRADY POST OFFICE, PENNSYLVANIA.

Letters Patent No. 96,777, dated November 16, 1869.

IMPROVEMENT IN UMBRELLAS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, Miss MAGGIE CLYDE, of Brady Post Office, in the county of Indiana, and State of Pennsylvania, have invented a new and useful Improvement in Umbrellas and Parasols; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to new and useful improvements in umbrellas and parasols, and consists in the construction and arrangement of certain parts, hereinafter specified.

In the accompanying plate of drawing—

Figure 1 represents a vertical section of an umbrella, constructed according to my invention.

Figure 2 is a section of the staff, showing the method of forming the joint, for holding it at a right angle.

Figure 3 represents a section of the staff, showing the thimble and lower ends of the top stays.

Similar letters of reference indicate corresponding parts.

The lower edge of the cover is turned up, so as to form a gutter entirely round the umbrella, with one spout for the discharge of the water, so that the water may be discharged from the umbrella whenever it will interfere least with the comfort of the carrier.

A is the cover,

B is the gutter, and

C is the spout.

D represents the staff of the umbrella, which is made, as seen in the drawing, in three sections, E being the upper one, F the middle, and G the lower one, or the handle proper.

H is the thimble, to which the stays I are attached.

The parts of the staff are connected by pivots, (or jointed together,) and the latches J J are so arranged, in connection with springs, that they hold the staff straight, like that of the common umbrella, or hold it so as to form two right angles, *m m*, as seen in fig. 1.

K K represent plates, which are fast in one section, through which the pivots pass which form the joints.

The pivot-ends of these plates form catches, *l*, for the hooks *n n* to catch into when the staff is held straight, and also lips, *p'*, for the hooks *n n* to bear against when the staff forms the angles *m*, seen in fig. 1.

o o represent springs, which are fastened in the staff, as seen at *p*, which bear against the inner sides and ends of the latches J J with a constant pressure.

It will be seen that the latches J J bow out at *q q*, so that they may receive pressure from the thumb to release the hooks from the lips and catches of the plate K. Until this pressure is given, the staff will remain as placed.

By this arrangement, the centre of the umbrella or parasol may be carried directly over the head, thus adding greatly to the protection afforded, either in rain or sunshine.

In the lower end of the thimble H, four (more or less) notches are made, for fitting the spring *r*, which holds up the top, so that the spout C may be turned to discharge the water in any position.

The staff is made to turn freely, where it passes through the top thimble S.

I am aware that umbrella-covers have heretofore been arranged to turn upon their handles, and I am also aware that umbrella-covers have been provided with gutters and spouts; but I do not claim these features, broadly.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. An umbrella or parasol, whose handle is provided with joints *m m*, locked, opened or closed, by the latches J J, plates K, and springs O, said parts being arranged and operating substantially as herein described, for the purpose set forth.

2. The runner H, provided with notches in its lower end, for holding the top or roof of the umbrella in any desired fixed position, as set forth.

MISS MAGGIE CLYDE.

Witnesses:

JOHN CLYDE,

B. F. LAUGHLIN.

United States Patent Office.

MARY A. SHEAFFER, OF ELIZABETHTOWN, PENNSYLVANIA.

Letters Patent No. 97,709, dated December 7, 1869.

IMPROVEMENT IN PROCESS FOR MANUFACTURING CHEESE.

The Schedule referred to in these Letters Patent and making part of the same

I, MARY A. SHEAFFER, residing near the borough of Elizabethtown, in the county of Lancaster, and State of Pennsylvania, have invented a certain new and improved Process in the Manufacture of Cheese, of which the following is a specification of the ingredients and manner of making.

The object of my process or invention is to produce a superior kind of scalded cheese, by utilizing the thick milk usually fed to the hogs, so that it may be adapted for restaurants, and to keep good for months for family-use.

To enable others to make said cheese, I will now describe my mode or process for making the same.

I take the thick milk, from which the cream has been previously skimmed, say twenty gallons. This I first put into a kettle, and boil it till well scalded. This is then put into a bag, and allowed to drain in the usual way. The bag with its contents is then soaked in tepid water in cold weather, (common well or spring water will answer in warm weather,) and when soaked therein, say from four to five hours, it is taken out and subjected to pressure, so as to expel all the water. When comparatively dry, the contents of the bag are poured upon a table, and all crumbled into small pieces (called cheese-rivels) by hand, adding two handfuls (say a gill and a half) of fine salt, well mixed in. These rivels are then put into a new or clean muslin bag, loosely tied, and laid upon a slatted table, so that a free circulation of air has access to all points. Attention is given by occasionally shaking and turning the bag, to secure a more uniform temperature to the mass, and when it begins to gum or become sticky, it is ready for the second boiling. This is given to it in a kettle, placed within a larger kettle

provided with boiling water, to prevent burning. I now add one-fourth pound of butter, four table-spoonfuls of white sugar, and four or five eggs, well beaten up, before the material has been heated to the boiling-point. This heat is continued until the material becomesropy on drawing out, and when cool, firm enough to allow being cut with a knife.

This now forms my improved scalded cheese for which I find so great a demand in our market, as a decided improvement over all cheese of this character heretofore known.

This cheese is simply poured into pans, first covered with a cloth, on which it becomes firm, of a rich color, and so highly approved of.

To convert this cheese into a still more firm body, and give it durability or the property to remain good for months, say two days after made as before said, the cheese is put into a vessel or vessels, covered, and again brought to a boiling heat. This third boiling results in producing a cheese deemed superior, and ardently sought after by keepers of restaurants and eating-houses, as well as others.

I am aware that numerous kinds of cheese are made from sweet milk with the cream, as also the ordinary scalded cheese, but I am not aware of this mode or process having been ever known or used before.

What I claim is, the above-described composition and mode of making my compound scalded cheese, substantially in the manner described.

MARY A. SHEAFFER.

Witnesses:

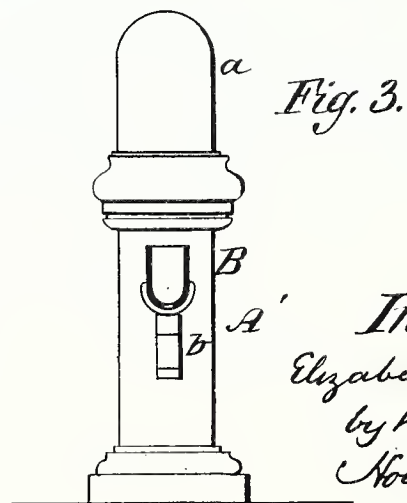
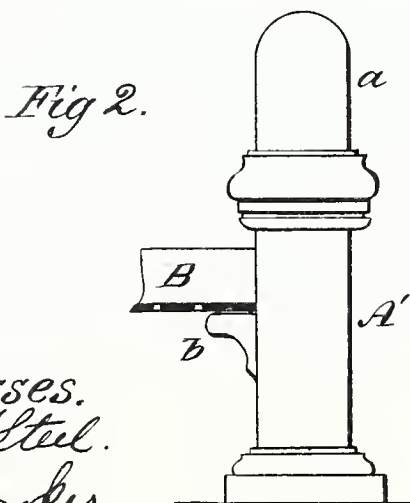
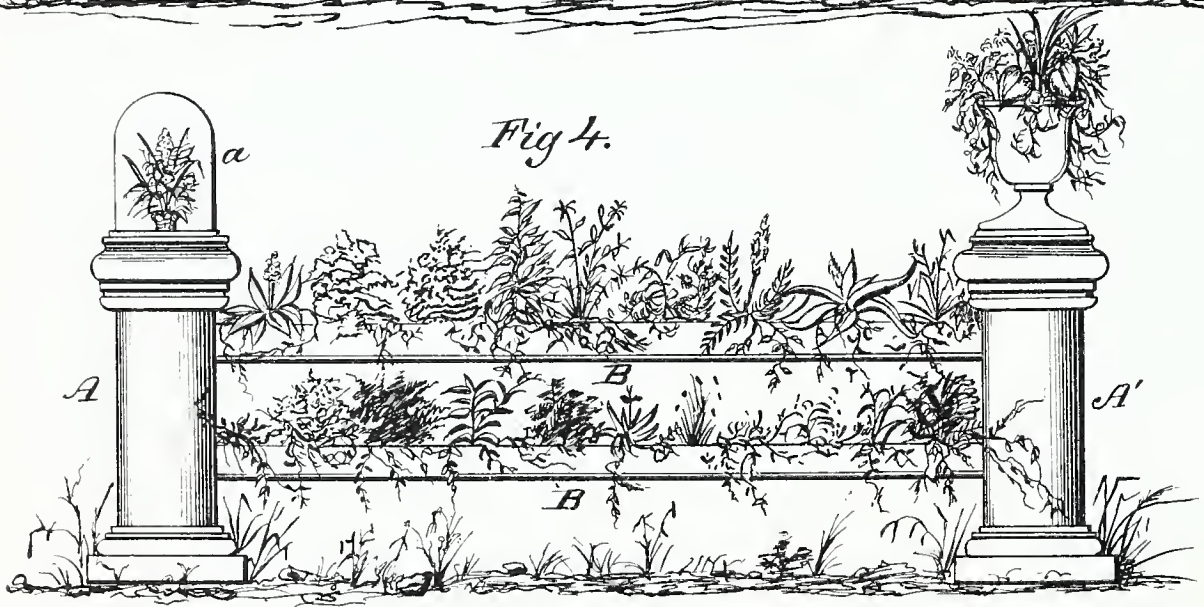
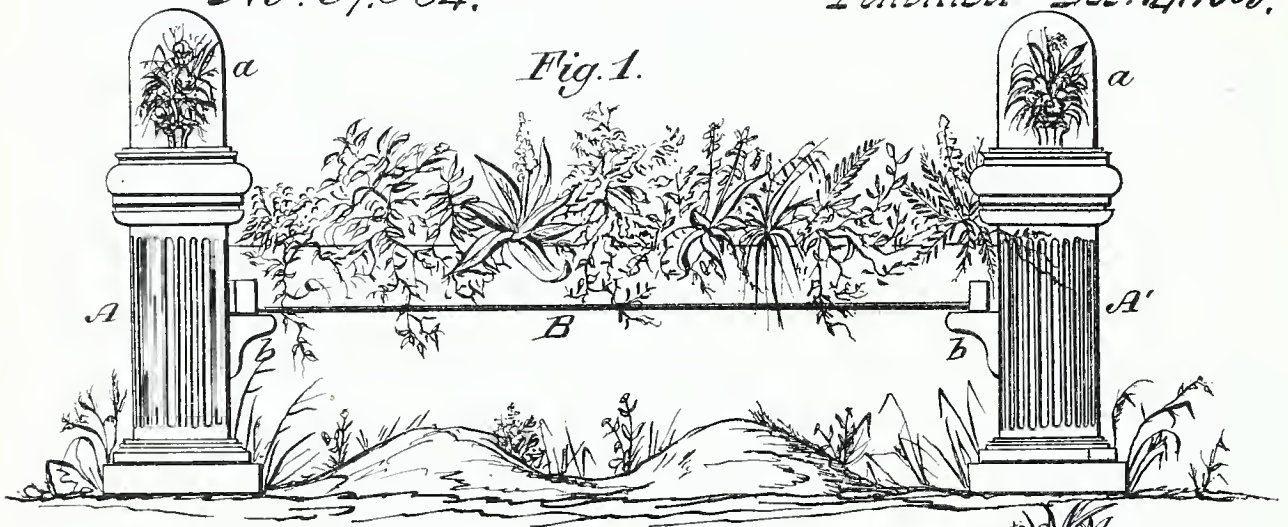
WM. B. WILEY,
JACOB STAUFFER.

E. M. Stigale,

Rail for Fence.

No. 97,984.

Patented Dec. 14, 1869.



Witnesses.
Wm. A. Steel.
John Parker

Inventor:
Elizabeth M. Stigale
by her attys
Howson and son.

United States Patent Office.

ELIZABETH MARY STIGALE, OF PHILADELPHIA, PENNSYLVANIA

Letters Patent No. 97,984, dated December 14, 1869.

IMPROVEMENT IN RAILS FOR ORNAMENTAL FENCE.

The Schedule referred to in these Letters Patent and making part of the same.

I, ELIZABETH MARY STIGALE, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an Improvement in Rails for Fences, &c., of which the following is a specification.

Nature and Object of the Invention.

My invention consists of a recessed rail, adapted to the columns or posts of a fence, or frames of verandas or windows, substantially as described hereafter, so as to add to the ornamentation of the same, by the cultivation, in the said rails, of creepers and other plants.

Description of the Accompanying Drawing.

Figure 1 illustrates my invention, as applied to a railing for cemetery-lots;

Figure 2, a longitudinal section of the rail;

Figure 3, a transverse section of the same; and

Figure 4, a modification of fig. 1.

General Description.

In figs. 1, 2, and 3—

A and A' represent two ornamental posts, which may be made of terra-cotta or other suitable material, and which may be surmounted with floral caskets *a*, made in accordance with my patent of November 22, 1868, or they may be surmounted with floral urns.

From post to post extends a rail, B, supported on suitable brackets, projecting from or forming a part of the posts. The rail B is hollow and open at the top throughout its entire length, and, in the present instance, is rounded on the under side, as shown in fig. 3; but the sectional form may be modified, as the

taste of the constructor may suggest, providing the rail has a longitudinal recess for receiving a mass of soil, in which can be cultivated ornamental creepers and other plants, the rails being perforated at the bottom, so as to insure proper drainage.

The rail may be made of terra-cotta, metal, or other suitable material, and its longitudinal recess may be partitioned at intervals, so as to form separate compartments for plants of different character.

Two recessed rails may be arranged between two posts, as shown in fig. 4, and in some cases more than two rails may be used.

My invention has been designed more especially for ornamental fences for cemetery-lots, but it will be evident that it may be applied to the construction of ornamental fences for gardens, terraces, &c.

The recessed rails may also be used in connection with verandas and windows, the rail-supporting brackets being secured to the post or frames of the verandas or window-frames, instead of to special columns.

Without limiting myself to any specific sectional form of recessed rail, or to any specific external configuration of the same.

I claim a recessed rail, adapted to columns, posts, or frames, substantially as described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ELIZABETH MARY STIGALE.

Witnesses:

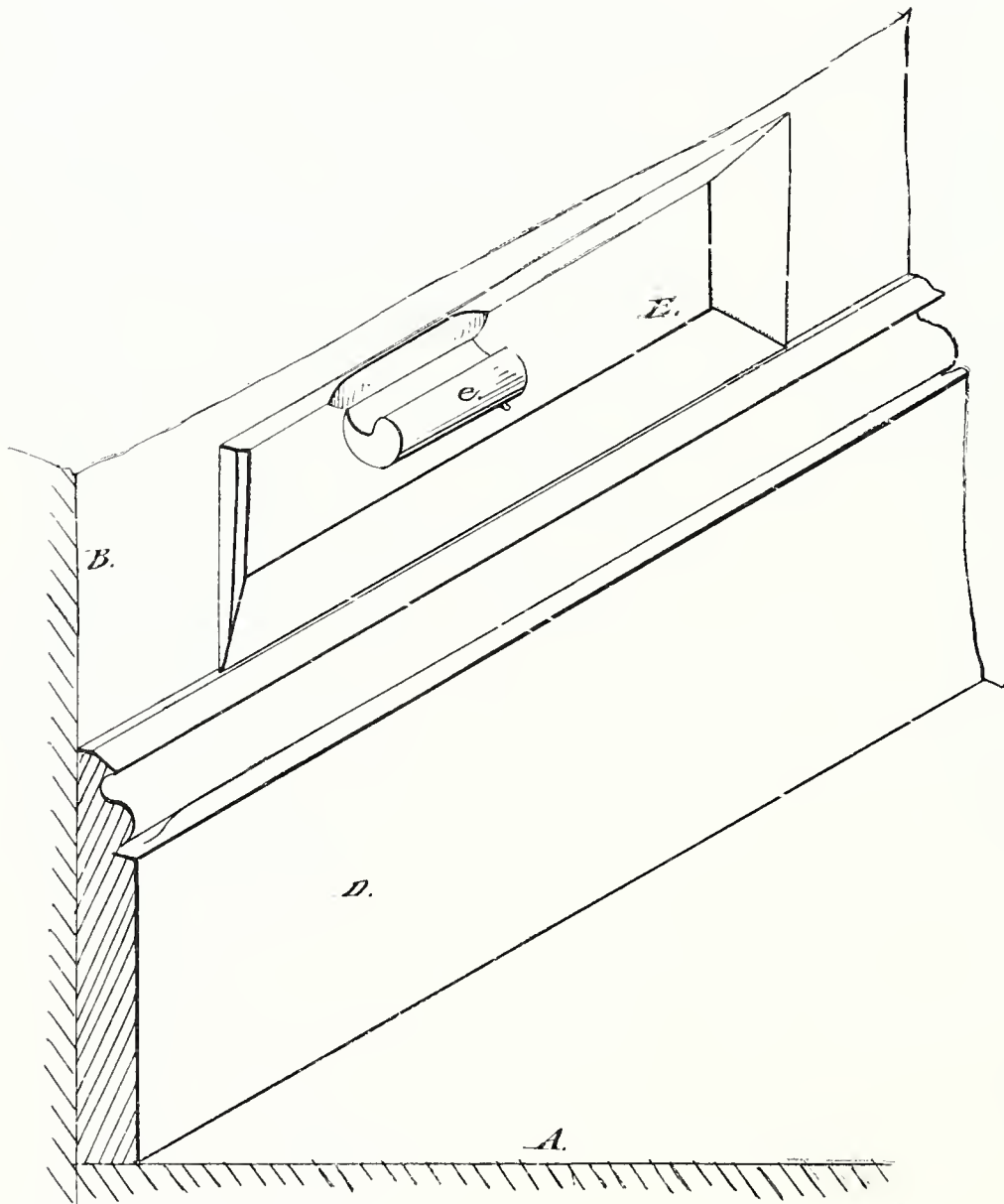
E. H. BAILEY,
HARRY SMITH.

M. Disston,

Wall Paper Protector.

No. 103432.

Patented May 24. 1870.



Witnesses:

Wm. A. Steel
John Parker

Inventor:

Manly Disston
PER
Henry Howson
attorney

United States Patent Office.

MARY DISSTON, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 103,432, dated May 24, 1870.

IMPROVED WALL-PAPER PROTECTOR.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern :

Be it known that I, MARY DISSTON, of Philadelphia, Pennsylvania, have invented a Wall-Paper Protector; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of a handled strip of wood or metal, to be held against a wall, while it rests on the upper edge of the skirting, so that the cleansing of the latter by the holder of the instrument can be readily accomplished without fear of soiling the wall-paper.

In order to enable others to make and use my invention, I will now proceed to describe the mode of constructing and using the same, reference being had to the accompanying drawing which forms a part of this specification, and in which the figure represents, in perspective, my improved wall-paper protector.

A represents the floor of a room ;

B, the papered wall of the same ; and

D, the painted skirting, the above parts being shown by red lines.

In scrubbing and washing skirtings, caution, rarely exercised by servants, is necessary to prevent the soiling of the wall-paper near the upper edge of the skirting with dirty water, by the slipping of an unskilfully managed brush or cloth.

In order to prevent such accidents, and to afford facilities for the washing of the skirting without the delay necessarily incurred in exercising the above-mentioned caution, I use a strip, E, which is made of wood, in the present instance, and so beveled toward its lower edge as to be very thin there.

This strip, at or near its upper edge, is provided with a handle, e, which the operator grasps in her left hand, so as to hold the strip against the wall while the lower edge is in contact with the upper edge of the skirting. With the scrubbing-brush, sponge, or cloth in her right hand, the operator proceeds to clean that part of the skirting immediately below the strip E, which effectually prevents the dirty water from coming in contact with the wall-paper. As the handle is placed near the upper edge of the strip, the cloth, when passed over the upper edge of the skirting, will not be struck against the hand, and the splashing of the dirty water against the paper, which would otherwise occur, is prevented.

It will be evident that, with the aid of this protecting strip, the operator can proceed rapidly with her work without fear of soiling the paper.

The strip may be made of metal, although wood is preferable, on account of its lightness.

I claim as my invention, and desire to secure by Letters Patent—

As a new manufacture, a wall-paper protector, consisting of a strip, E, having a narrow lower edge, and provided with a handle, e, arranged as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARY DISSTON.

Witnesses:

JOHN WHITE,
C. B. PRICE.

J. Carter,

Case for Fruit Jars.

No. 110,340.

Patented Dec. 20, 1870.

Fig. 1.

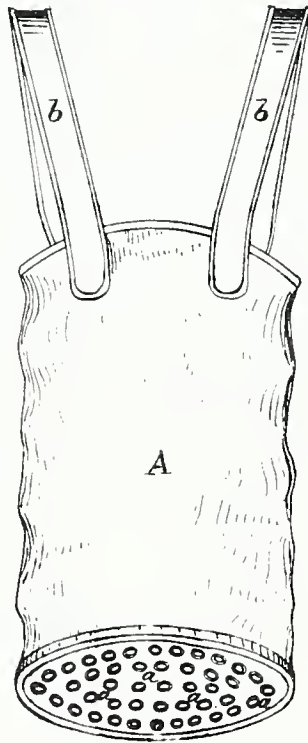
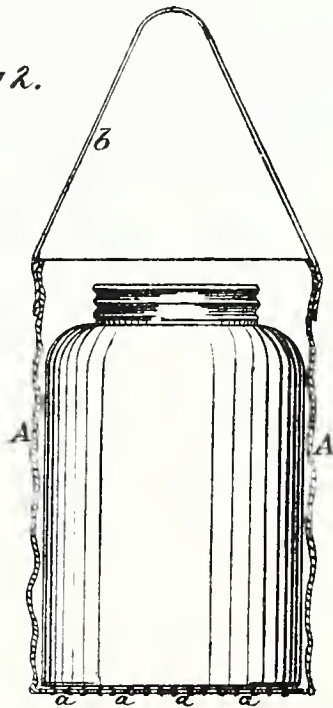


Fig 2.



Witnesses
Wm Hamilton Johnson
L. H. Hamilton

}

Jane Carter, Inventor,
By her Attorneys,
W. H. P. P. & Johnson.

UNITED STATES PATENT OFFICE.

JANE CARTER, OF TOWANDA, PENNSYLVANIA.

IMPROVEMENT IN SAFETY-CASES FOR FRUIT-JARS.

Specification forming part of Letters Patent No. **110,340**, dated December 20, 1870.

To all whom it may concern:

Be it known that I, JANE CARTER, of Towanda, in the county of Bradford and State of Pennsylvania, have invented a new and useful Improvement in Safety-Cases for Preserve-Jars; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which represents a view in perspective of the safety device, showing its closed sides and perforated bottom, and a vertical section thereof with the jar inclosed within said case.

In sealing preserved fruits and other articles in jars, one of the most essential things is to exclude the air therefrom before sealing them. The present method of accomplishing this is by immersing each jar in boiling water, which causes the contents to expand, and thus force the air out of the jar. Much difficulty has been experienced in handling the jars during the process of immersing and in withdrawing them from the boiling water. The glass jars are not only constantly liable to be broken by accidental contact, but the exposure of the hot glass to the air upon their withdrawal frequently causes them to crack and become unserviceable as articles of merchandise, and frequently a loss of the preserves.

My improvement is chiefly designed to obviate this very serious difficulty; and it consists in protecting the jars by a safety-case composed of any suitable cotton or linen fabric, *A*, having its bottom perforated with eyelet-holes *a*, for the twofold purpose of facilitating the admission of the water into the case while immersing the jar, and of allowing it to

pass out from the case on withdrawing it. The sides of the case form a shield to the jar, and, being wet with the water, completely exclude it from contact with the air, and thus prevent it from cracking, while it retains the heat of the jar a much longer time than if its sides were exposed, and thus gives more time to effect the sealing before it cools. In this respect the case not only forms a protector to the jar, but a heat-retainer thereto. The case should be made so as to admit of the easy insertion and withdrawal of the jar therefrom, and - - - - -

loop-handles, *b*. The case is made in any convenient manner to receive and hold the jar upright. While the case thus insulates the hot glass jar from the outside air, it also prevents it from being broken by violent contact with others in handling it, and by being tossed against others or the sides of the boiling vessel by the ebullition of the hot water.

In this manner I obtain a cheap and effective safety-case for manipulating glass jars during the process of preserving fruits, which, as a new article of manufacture, I have found to answer the purpose with success.

Having described my invention, I claim—

The safety-case for preserve-jars made of cotton or other fabric with closed sides and a perforated bottom, as herein described, as a new article of manufacture.

In testimony whereof I have signed my name.

JANE CARTER.

Witnesses:

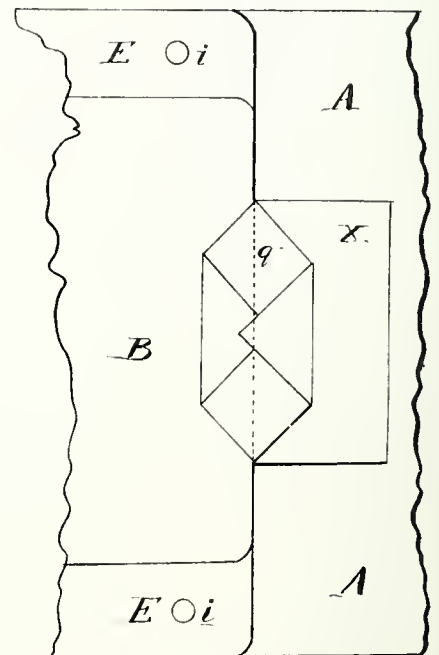
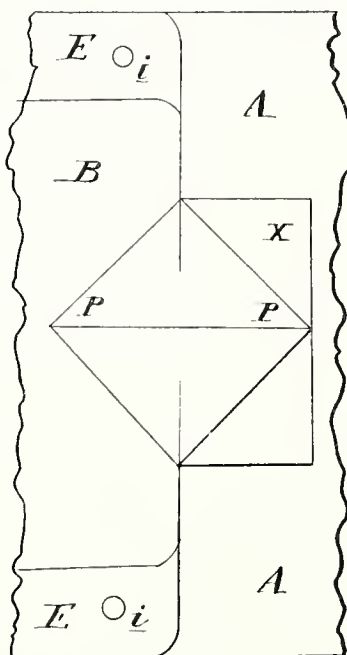
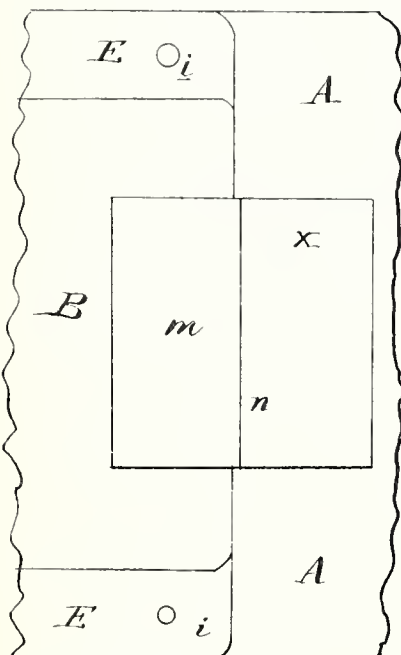
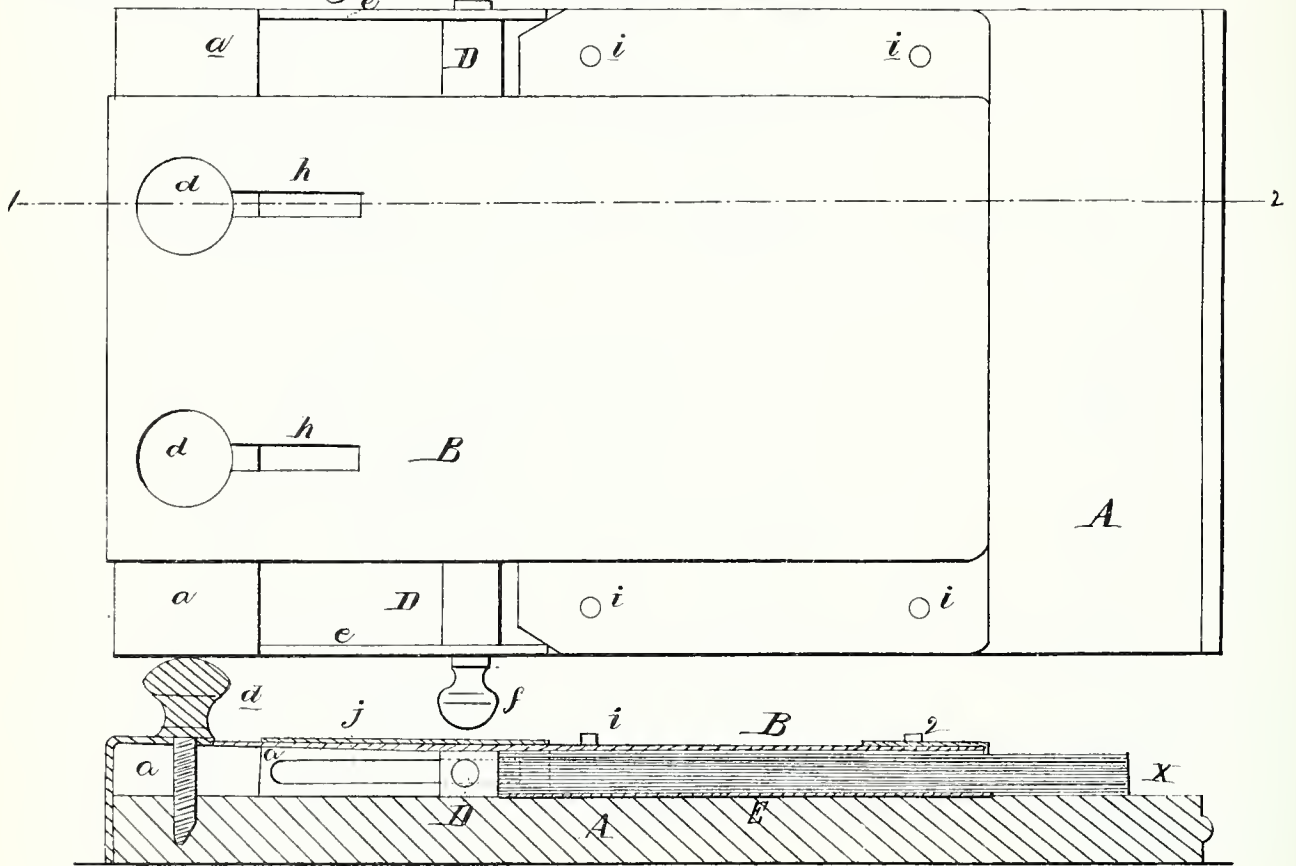
HELEN CARTER.

JOSEPHINE CARTER.

its open end with one or in

S. M. Kirk & E. J. Howlett.
Paper Bag Mach.

N^o 4029. Fig. 1. ^f Reissued Jun. 14, 1870.



Witnesses:

W. A. A. McKidley
Wm. Burns

Inventor:

George Harding
att'y

UNITED STATES PATENT OFFICE.

EDWIN J. HOWLETT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNEE OF
HIMSELF AND SUSAN KIRK.

IMPROVEMENT IN TOOL FOR MANUFACTURING PAPER BAGS.

Specification forming part of Letters Patent No. 63,342, dated February 26, 1867; Reissue No. 3,718, dated November 9, 1869; Reissue No. 4,029, dated June 14, 1870.

To all whom it may concern:

Be it known that EDWIN J. HOWLETT, of Philadelphia, Pennsylvania, and SUSAN M. KIRK, of Camden, New Jersey, did invent an Instrument for Facilitating the Manufacture of Paper Bags; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

The invention consists of an instrument, fully described hereafter, whereby the closing of the ends of the paper tubes and the conversion of the same into paper bags are facilitated.

In order to enable others to make and use said invention, I will proceed to describe its construction and operation.

On reference to the accompanying drawing, which forms part of this specification, Figure 1 is a plan view of the instrument for facilitating the manufacture of paper bags; Fig. 2, a section on the line 1 2, Fig. 1; and Figs. 3, 4, and 5, diagrams illustrating the manner of using the instrument.

Similar letters refer to similar parts throughout the several views.

A represents a plain flat board, to the upper surface of which, near one end, is secured a transverse strip, *a*, and to the top of the latter is secured a blade, B, by set-screws *d*, the stems of the latter passing through elongated openings in the blade, which is made of thin elastic metal or other suitable material, its outer end tending to bear on the board A. On each edge of this board, and near the strip *a*, is a vertical plate, *e*, each plate having an elongated opening, *j*, through which passes a set-screw, *f*, into the end of the strip D, so that after loosening these screws the said strip can be adjusted on the board A to or from the strip *a* at pleasure, and secured after adjustment.

A plate, E, is illustrated in the drawing as occupying a position beneath the blade B; but this plate is not necessary excepting in the absence of the blade, and when used in the manner and under the circumstances described hereafter.

The instrument is employed in the following manner for aiding the operator in closing the

bottom of paper bags: Several tubes of paper, open at both ends and flattened into a compact layer, are placed evenly one above another, as shown at *x*, Fig. 2, on the board A beneath the blade B, the layer at one end bearing against the strip D, which has been so adjusted that the opposite end of the layer shall project a given distance beyond the outer end of the blade.

The operator now takes the projecting end of the uppermost of the tubes of paper, and turns it over and presses it against the upper surface of the plate, as seen at *m*, Fig. 3, the fold having an edge, *n*, determined by the end of the plate. The folded portion is now elevated, the tube of paper stretched laterally and pressed down, so as to assume the form represented in Fig. 4. The corners *p p* are now folded, as seen in Fig. 5, and the folds pasted, thus completing the bottom of the bag, which is again folded on the dotted line *q*, after which the entire bag is withdrawn from beneath the blade B and placed upon a layer of previously-completed bags and submitted to a moderate pressure.

Tube after tube of the layer beneath the blade is thus treated with that rapidity which could not be effected without the aid of the above-described instrument. When larger or shorter bags are required, the strip D is so adjusted that no more of each tube shall project beyond the end of the blade than is absolutely necessary for making the folds described.

If the openings in the blade B for the admission of the screw *d* are made of sufficient length to allow the blade to be adjusted longitudinally the strip D may be dispensed with, the front of the stationary strip *a* in this case serving as a guide against which to adjust the tubes of paper, and the adjustable blade serving to determine the extent of the projection of the tubes beyond the outer end of the said blade.

A simple plate, E, may be used in place of the blade, the plate being maintained in one position laterally and longitudinally by guiding-pins *i*, which permit it to be elevated, so that a layer of flattened paper tubes may be placed beneath it, the tubes in this case being folded over the front edge of the plate and the bar D determining the extent of the fold,

and the plate or blade B may be fixed, if desired, at its rear end, instead of adjustable.

What is claimed as the invention of EDWIN J. HOWLETT and SUSAN M. KIRK, and sought to be secured by Letters Patent, is—

1. The construction of the board A, blade B, and adjustable strip D, the whole being arranged substantially in the manner described.

2. The combination of the board A, strip *a*, and blade B.

3. The combination of a board, A, with a blade, B, secured substantially as described.

4. The combination of a board, A, the guide-plate E, and adjustable strip D.

EDWIN J. HOWLETT.

Witnesses:

JNO. P. ONDERDONK,
E. IRVIN SCOTT.

A. M. Smith,
Washing Machine.

No. 101,321.

Patented Mar. 29. 1870.

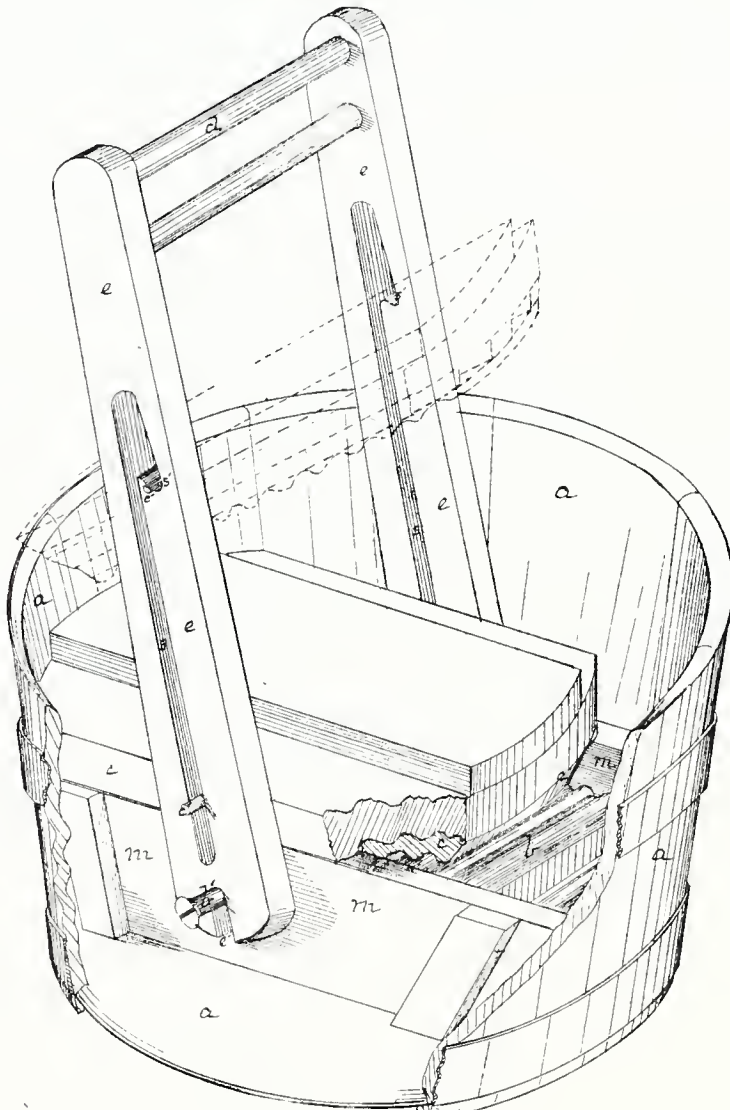


Fig. 1.

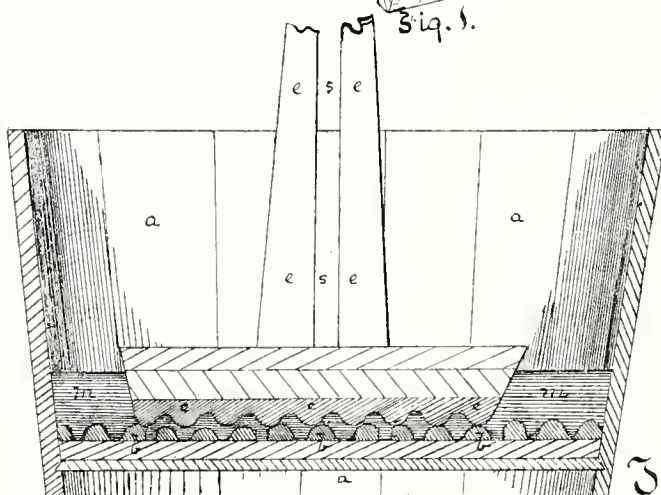


Fig. 2.

Witnesses:

Wm. H. Hall
R. C. Henshall

Inventor:

Anna M. Smith,
by Bakewell & Kniskern
Attys.

United States Patent Office.

ANNA M. SMITH, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 101,321, dated March 29, 1870.

IMPROVED WASHING-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ANNA M. SMITH, of the city of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Washing-Machine; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a perspective view of my improvement, showing the position of the upper wash-board in place for actual use, and also suspended from above for convenience in taking out and putting in articles of clothing, &c.; and

Figure 2 is a vertical section formed by a plane passing through the middle of the machine in the direction of the motion of the moving wash-board.

Like letters of reference indicate like parts in each.

My invention consists in an improved construction of washing-machines, to be called the Lady Washing-Machine, wherein two horizontal wash-boards operate face to face by the reciprocating motion of one, with fulera so arranged as to secure ease of operation, and with devices for convenience in raising and suspending the upper board at pleasure.

To enable others skilled in the art to make and use my improvement, I will proceed to describe its construction and mode of operation.

As shown in the drawings, it is adapted for use with an ordinary washing-tub *a*, and for this purpose the corners of the wash-boards *b* and *c* and of the frame-work *m*, in which the lower board is set, may be rounded and beveled, the better to fit the tub.

The wash-boards *b* and *c* are of the usual or any known construction, with corrugated or ribbed rubbing-faces, such faces being arranged so as to operate against each other. Such boards are made straight, (as distinguished from concave and convex,) and are arranged horizontal, or nearly so; the one *b* stationary and as long as may be desired, but preferably so as to fit the inside of the tub *a*, and the other, *c*, shorter and movable, so as, by a reciprocating motion on the lower one, *b*, to be operative in washing.

Each of the boards *b* *c* has, at or near the middle of each edge, a journal *b'* *c'*.

The power requisite to impart a reciprocating motion to the board *c* is given through a handle, *d*, and side bars *e*.

Each bar *e* is recessed or bifurcated at its lower end, as at *e'*, so as thereby to rest on and engage the journals *b'* of the stationary board *b*.

In each of the bars *e*, also, I make slots *s*, extending from a point at or a little above the top of the tub *a* down as far as may be necessary, but preferably to about such a point that the journal *c'* operating therein will seldom, if ever, in its motion, rest on the lower ends of such slots, the design being that in most cases the weight of the upper board *c* shall cause the frictional contact desired in the operation of washing.

The journals *c'* operate in these slots *s*, and a reciprocating motion is communicated to the board *c* by moving the handle *d* back and forth. If so desired, the frictional contact of the boards may be increased by weights placed on the upper board *c*.

At or near the upper ends of each of the slots *s*, and communicating therewith, I make a seat or recess, *s'*, such that, when it is desired to remove the articles being washed or to put in more "washing," the operator, by taking hold of the upper board *c*, (for which purpose handles may be provided, if so desired,) can raise it up, rest one end over or on the edge of the tub *a*, and drop the journals *c'* into the bearings *s'*, as shown by dotted lines in fig. 1, where it is held suspended and out of the way till the operator is ready to resume; but, if so preferred, the upper board, handle, and side bars may be lifted out together, though the other mode of operation is preferable. By so arranging the devices described that the fulera of the lever-operating side bars *e* shall be near together at the bottom of the tub, I provide for doing the work effectively with the least expenditure of power.

The machine cannot become clogged. Springs and other appliances liable to get out of order are dispensed with. It is cheap in construction, simple in operation, and durable.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with the movable board of a pair of wash-boards, the side bars *e*, each having a slot, *s*, and recess or bearing *s'*, substantially as described.

2. The side bars *e* engaging at their lower ends, by journals *b'* or otherwise, a fixed or stationary part of the machine, and having slots *s* extending to near the lower end of the bars *e* in which to operate the journals *c'* of the movable board, substantially as described.

In testimony whereof, I, the said ANNA M. SMITH, have hereunto set my hand.

ANNA M. SMITH.

Witnesses:

J. H. SMITH,

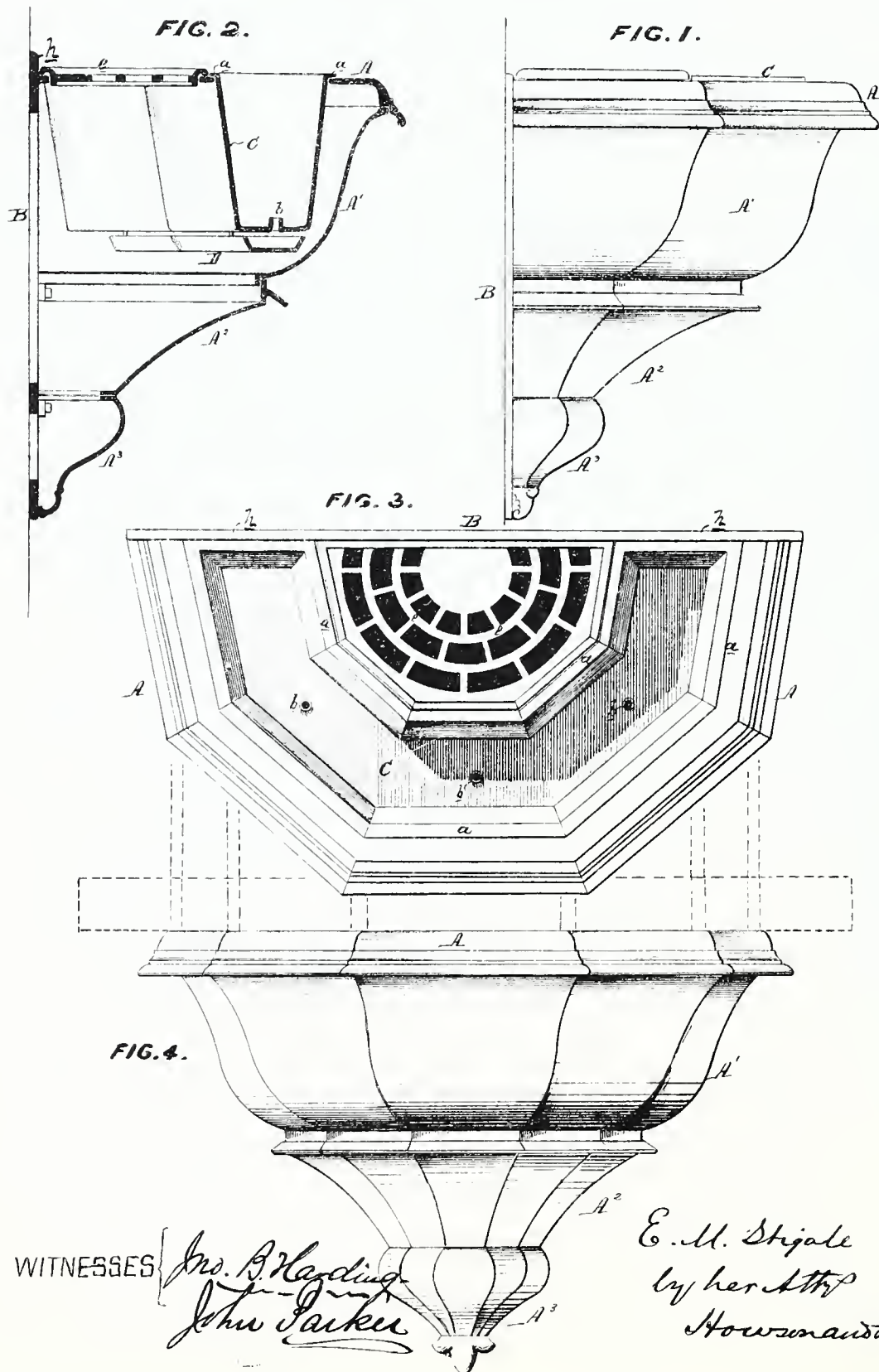
A. R. J. SMITH.

E. M. Stigale,

Floral Bracket.

No. 112,748.

Patented Mar. 14, 1871.



WITNESSES

Geo. B. Harding
John Parker

E. M. Stigale
by her atty
Howson and Co

United States Patent Office.

ELIZABETH MARY STIGALE, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 112,748, dated March 14, 1871.

IMPROVEMENT IN FLORAL-BRACKETS.

The Schedule referred to in these Letters Patent and making part of the same.

I, ELIZABETH MARY STIGALE, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented a Floral-Bracket or Frame for Windows, &c., of which the following is a specification.

Nature and Object of the Invention.

My invention consists of a bracket, arranged for attachment to a window-frame, wall, or other fixed object, and having a trough or recess for the reception of earth in which to cultivate creepers and other plants; and

My invention also consists of certain peculiarities in the construction of the bracket, and of the combination with the latter of a glazed frame for the protection of the plants.

Description of the Accompanying Drawing.

Figure 1 is a side view of my floral-bracket or frame for windows, &c.;

Figure 2, a sectional view of the same;

Figure 3, a plan view; and

Figure 4, a front view.

General Description.

The bracket, as represented in the drawing, is made of cast-iron, and consists of horizontal sections A, A¹, A², and A³, bolted or otherwise secured together and to a back piece, B, the latter being arranged in any suitable manner for attachment to a wall, window-frame, or other fixed object.

The upper section or top plate A of the hollow bracket has a recess, corresponding in shape to the exterior of the latter, for the reception of a deep trough or basin, C, which tapers slightly toward the bottom, as best observed in fig. 2, and is supported by flanges *a a* at its upper end, which rest upon the top plate A.

The trough or basin when thus arranged within the bracket can, at any time, be lifted out of the same, either for the purpose of obtaining access to the interior of the bracket or for filling the said trough with earth or mold in which to cultivate creepers and other plants.

In order to insure proper drainage of the trough or basin its bottom is perforated at one or more points, the perforations being preferably formed in projections *b*, raised slightly above the bottom of the trough, as shown in fig. 2, so that all the moisture may not be drawn off from the said trough.

The drippings from the perforated bottom of the trough are caught in a shallow vessel, D, suspended in any suitable manner within the bracket; and in order to prevent injury to the wall or other object to which the bracket is attached by the overflowing of the said vessel, I propose to furnish the latter

with an overflow-tube, projecting through the front or side of the bracket.

The back plate B projects slightly above the top of the bracket, as plainly shown in the drawing, so as to form a projecting ledge, *h*, which serves as a dasher, to prevent the splashing of muddy water upon the window-sill or other object to which the bracket is attached, when the plants in the trough are watered.

The portion of the top of the bracket between the trough and the back plate B is, in the present instance, occupied by a permanent or detachable plate, *e*, upon which can be placed a bird-cage or other object.

This plate can, however, be dispensed with, and the trough be made of such a shape as to occupy the whole interior of the bracket.

Although I prefer that the bracket should be constructed of cast-iron, as above described, it can be made of sheet metal, pottery-ware, wood, or other suitable material, and either in sections or in one piece, and of any desired size or shape.

The trough, also, instead of being made detachable, as above described, can be formed in and with the bracket, or be merely a recessed portion of the latter.

As first described the bracket is intended as an ornamental attachment for windows, it being made of the same width as the latter, and arranged for attachment to the lower portion of the frame, or to the wall, either inside or outside of the window.

When arranged outside of a window, I propose, in some cases, to combine with the bracket a permanent or detachable glazed frame, to entirely inclose the window, as indicated by dotted lines in fig. 4.

The bracket and glazed frame together will have the appearance of an ornamental box-window, and the glazed frame will serve to protect the plants cultivated in the trough or recess of the bracket, and to retain the warmth of the inner apartment about the said plants.

Claims.

1. A bracket, arranged for attachment to a wall, window-frame, or other object, and having a recess or trough for the reception of earth, all substantially as described.
2. The said bracket, when combined with a glazed frame and adapted to a window, as set forth.
3. The said bracket, when provided with a detachable trough or basin, C, suspended within the bracket by flanges *a a*, substantially in the manner described.
4. The short tubes or perforated projections *b* in

the bottom of the said trough or basin, for the purpose specified.

5. The combination of the said trough with a drip-receiver, D, arranged beneath and within the hollow bracket, as described.

6. The projecting ledge or dasher *h*, at the back of the bracket, for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ELIZABETH MARY STIGALE.

Witnesses:

JOHN B. MAKINS,
MAURICE MURPHY.

CELIA P. CLARK.

Improvement in Needle-Sharpening Attachments for Sewing-Machines.

No. 114,265.

Patented May 2, 1871.

FIG: 1.

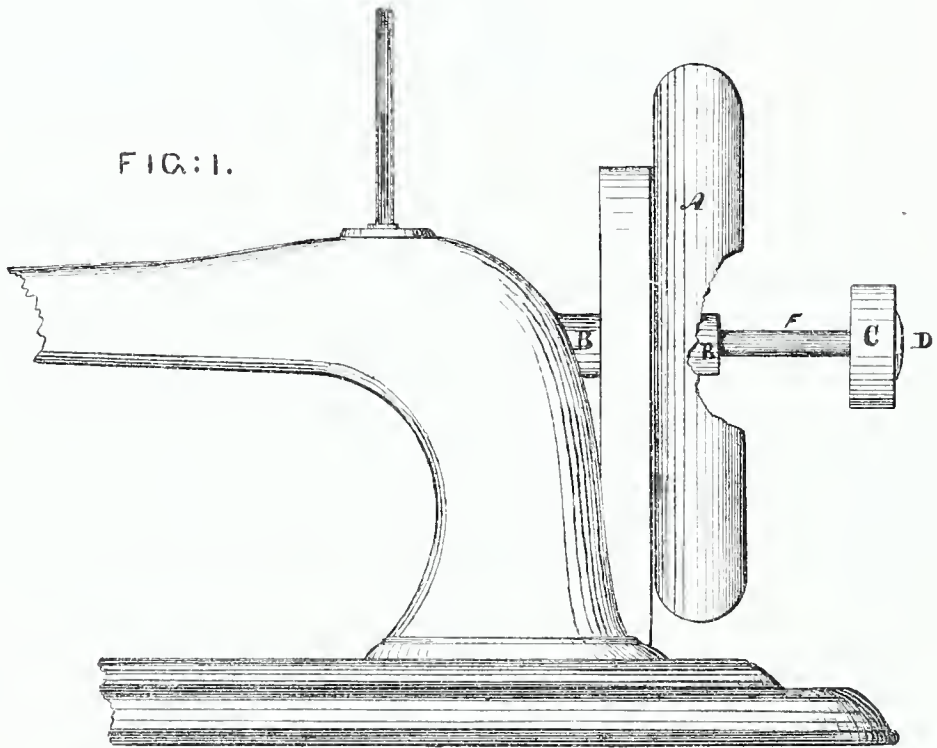


FIG: 2.

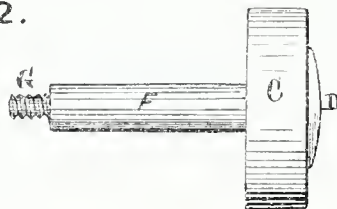
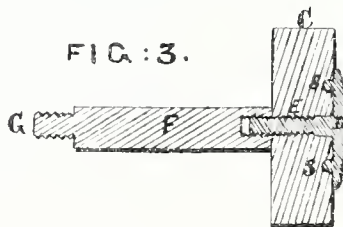


FIG: 3.



Witnesses:

H. H. Young
J. M. Burr.

Celia P. Clark

By David A. Burr
Atty.

UNITED STATES PATENT OFFICE.

CELIA P. CLARK, OF LOCK HAVEN, PENNSYLVANIA.

IMPROVEMENT IN NEEDLE-SHARPENING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **114,265**, dated May 2, 1871.

To all whom it may concern:

Be it known that I, CELIA P. CLARK, of Lock Haven, in the county of Clinton and State of Pennsylvania, have invented a new and useful Improvement in the Attachment of a Needle-Sharpening Device to Sewing-Machines, of which the following is a specification.

My invention relates to the combination of a grinding-wheel, of stone or emery, with the end of the horizontal revolving shaft carrying the fly-wheel of a Singer sewing-machine, the object of my invention being to apply to such a machine in a ready and simple manner a device for sharpening and repointing needles, and for sharpening scissors, &c., which shall be operated by the power driving the machine.

In the accompanying drawings, Figure 1 is an elevation of a portion of a Singer sewing-machine with my device attached thereto; Fig. 2, an elevation of the grinding-wheel and shaft detached; and Fig. 3, a longitudinal section of the wheel and its shaft, showing the manner of combining them.

A is the fly-wheel of a Singer sewing-machine; B, the revolving shaft to which it is secured, and which drives the sewing mechanism of the machine; C, a circular grinding-stone, either natural or artificial, of any suitable width, diameter, and equality; D, a metallic plate or disk secured to a threaded shank, E, and provided with lugs S S at opposite points on its inner face.

The stone C is centrally perforated to receive the shank E of the plate D, and recesses are formed on its outer face to receive the lugs S S, projecting from said plate, as illustrated in Fig. 3. The threaded shank E projects be-

yond the face of the grinding-stone C when inserted through the central aperture therein.

F is a shaft or rod having a threaded recess cut centrally therein at one end, and a screw, G, cut thereon at its opposite end. A threaded recess is cut centrally in the outer end of the shaft B to receive the screw end of the rod F. The grinding-stone C is rigidly secured with great facility to the rod or shaft F by means of the circular plate D and its projecting shank E by simply screwing the shank into the end of the rod F. The lugs S S, by fitting into corresponding recesses in the wheel E, serve to prevent the latter from turning upon the shank independently thereof. The device is then readily attached to the revolving shaft operating the sewing-machine by screwing the end of the rod F into the threaded aperture in the outer end of said shaft, as illustrated in Fig. 1.

Although my device is designed specially for use in combination with a Singer sewing-machine, I contemplate its combination with the exposed or outer end of any shaft operating the sewing mechanism of a sewing-machine. I do not claim broadly the combination of a needle-sharpening attachment with a sewing-machine.

I claim as my invention—

The within-described grinding or polishing wheel C, binding-plate D, revolving shaft B, and interposed rod F, all arranged and combined substantially in the manner and for the purpose herein set forth.

CELIA P. CLARK.

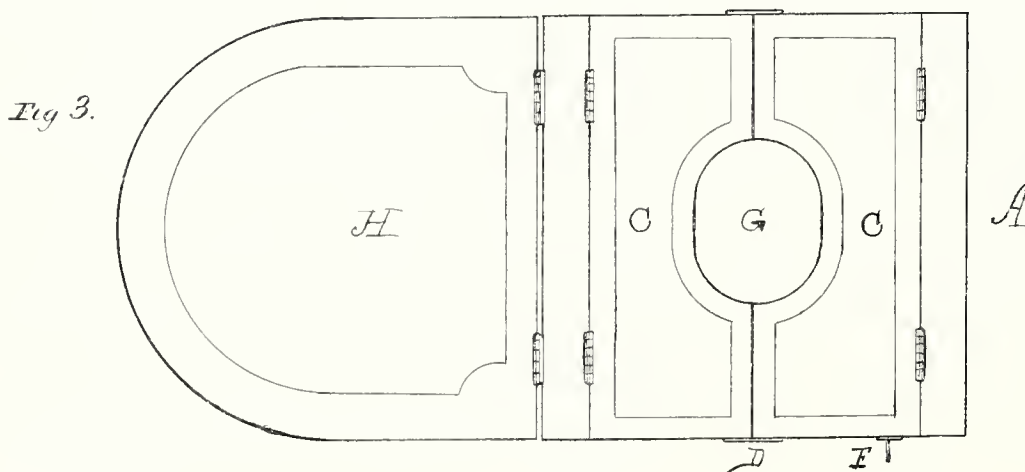
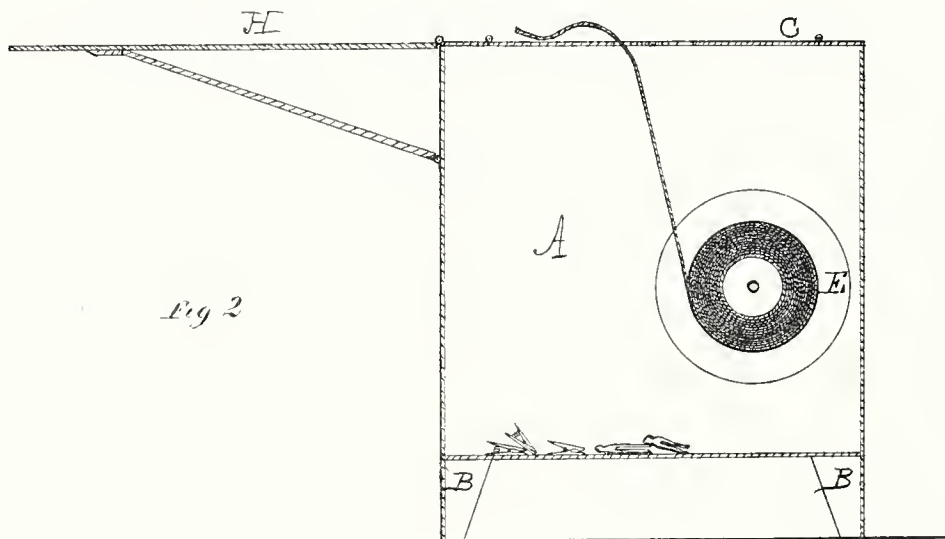
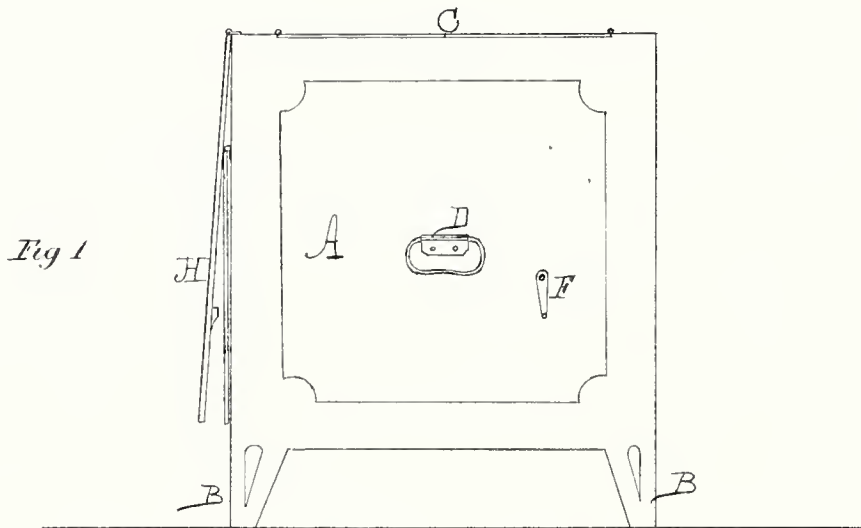
Witnesses:

JOHN S. MADER,
D. L. BROWN.

MARY A. H. SAURMAN.
Improvement in Laundry-Boxes.

No. 115,109.

Patented May 23, 1871.



Witnesses:
J. E. Schiedt
Dwight V. Knealy.

Inventor:
Mary Ann Saurman
by John W. Diederich
Att'y.

UNITED STATES PATENT OFFICE.

MARY A. H. SAURMAN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN LAUNDRY-BOXES.

Specification forming part of Letters Patent No. 115,109, dated May 23, 1871.

To all whom it may concern:

Be it known that I, MARY A. H. SAURMAN, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Article for Laundry Purposes; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand and use the same, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a side view of the device illustrating my invention. Fig. 2 is a central vertical section, and Fig. 3 is a top or plan view thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a box, forming a stool, within which is placed a drum or windlass, on which is to be wound the clothes-line, the axis of the drum having a crank secured thereto for convenient manipulation. The top of the box is hinged, and permits access to the interior thereof. When the box is closed and in use the line can be run out through openings or spaces cut out from the hinged top. The box also forms a receptacle for clothes-pins or other articles for laundry use.

In the drawing, A represents a box, which is provided with feet B and hinged lids C, together forming a stool. Handles D are secured to the box, in order to afford ready means of carrying the stool from place to place. E represents a drum or windlass, which is journaled to the sides of the box A, and one of its journals is extended, in order to have secured to it, on the outside of the box, a crank-handle, F, so that the drum may be conveniently rotated.

It is preferable that the drum is arranged somewhat near one end or side of the box, so as to leave room for the reception of clothes-pins and other articles of laundry purposes.

The drum is designed to have wound upon it the clothes-line, which passes through the

opening G in the lids C, and may be unwound by drawing or pulling, but wound up by means of the crank-handle F.

When it is designed to use the device it may be carried from place to place. The stool can be used by the operator for reaching the posts or clothes, and as he or she moves from side to side the stool is readily carried, while the line plays out during the movement. When the clothes are taken down the operator releases the line from the posts, and, by turning the crank-handle, winds the line on the drum. Should the posts or clothes be out of ordinary reach, the stool will afford means of elevation for the operator. The lids C form the top of the stool, but may be swung entirely open for full access to the interior of the box.

During the operation of ironing the top of the stool may form a table for the sprinkled clothes, starch, or irons; and to assist this I have hinged to the box a leaf, H, which increases the top surface of the stool. A brace or prop will be properly arranged to keep the leaf extended or open.

It will be seen that the leaf forms a continuation of the top of the box, and when folded in nowise interferes with the free handling of the stool. The device will be found to be simple and useful.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A laundry-box, consisting of the box-stool A, having lids C, provided with openings or spaces, as described, in connection with the windlass E and crank F, all constructed and operating in the manner and for the purpose described.

The above signed by me this 25th day of April, 1871.

M. A. H. SAURMAN.

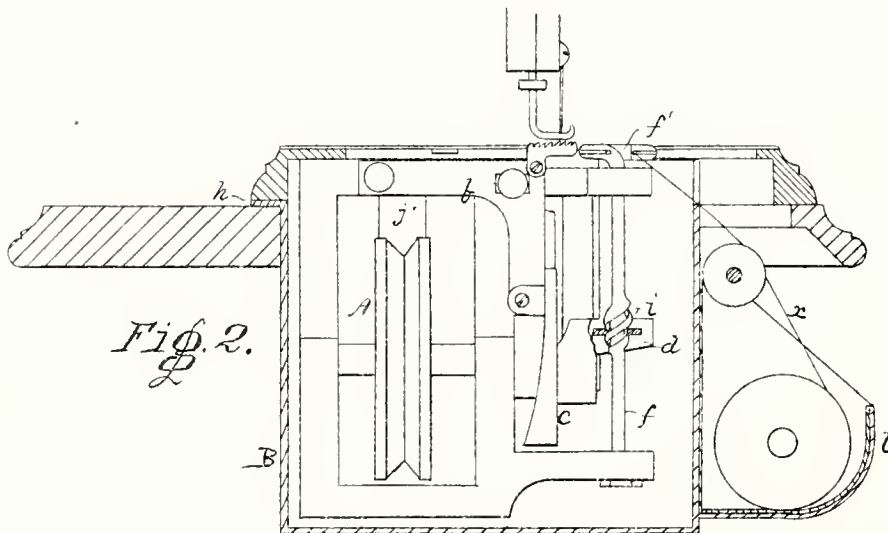
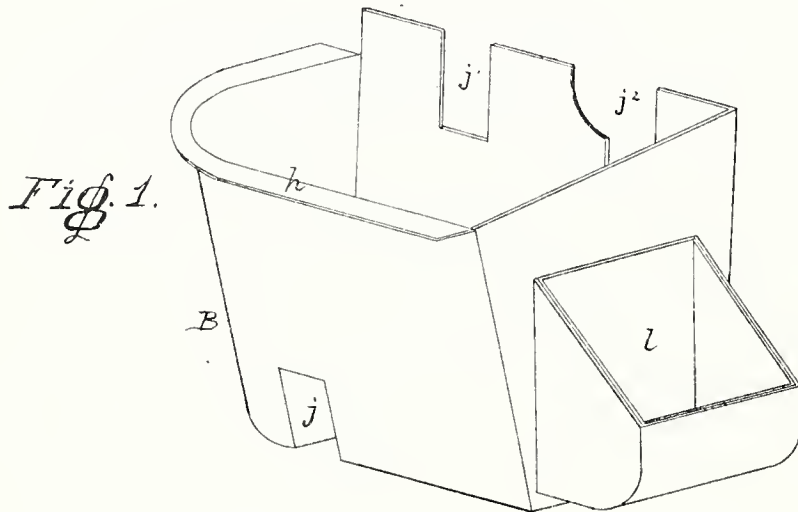
Witnesses:

JOHN A. WIEDERSHEIM,
PERCY V. KNEASS.

Mary E. Antrim Attachment for the "Grover and Baker" Sewing Machine

No. 118,671.

Patented Sep. 5, 1871.



Witnesses

Wm. A. Steel.
John Parker

Inventor

Mary E. Antrim
By her Att'y
H. Howson

UNITED STATES PATENT OFFICE.

MARY E. ANTRIM, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 118,671, dated September 5, 1871.

To all whom it may concern:

Be it known that I, MARY E. ANTRIM, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an Attachment for Sewing-Machines, of which the following is a specification:

My invention consists of a box or case adapted for attachment to the under side of a sewing-machine, and having a receptacle for a spool or other object, as fully described hereafter.

Figure 1 is a perspective view of my improved attachment for the Grover & Baker sewing-machine; Fig. 2, a sectional view of the same, showing a portion of the machine in dotted lines; and Fig. 3, a section on the line 1 2, Fig. 2.

In the Grover & Baker sewing-machine a considerable portion of the mechanism is arranged beneath the bed-plate, namely, a driving-pulley, A, feeding-devices *b*, a crank-wheel, *c*, by which a vertical reciprocating motion is imparted to an arm, *d*, and a vertical rod, *f*, rotated by the arm *d* and commonly known as the spiral rod. This latter has at its upper end a hook, *f'*, which carries the thread *x*, and which takes the place of the lower needle or shuttle of other sewing-machines. Owing to the manner in which the spiral rod is driven, (see Fig. 2,) its threaded or twisted portion *i* requires to be constantly and freely lubricated, so that when the machine is worked rapidly oil is apt to be thrown off by the said rod in such a manner as to soil the work or the dress of the operator. The operator's clothing is also frequently soiled by contact with other exposed

portions of the machine beneath the bed-plate. These objections I have overcome by inclosing the entire lower portion of the machine in a case or box, B, the form of which will be best observed in Fig. 1, this box being provided with a lip or flange, *h*, which extends partly around its upper edge, and which is inserted between the bed-plate of the machine and work-table X, and suitably secured to the latter, as shown in Figs. 2 and 3. Openings or slits *j*, *j'*, and *j''* are cut in the box for the passage of the driving-band *k* and of the arm *d*, and at one end of the said box is formed a spool-receptacle, *l*, which may be lined with any suitable soft material to prevent rattling when the spool is turned in unwinding the thread from the same.

This receptacle is preferable to the usual spindle for holding the spool, inasmuch as if the thread becomes slightly uncoiled from the spool it will not tangle, (as it would about the spindle,) but will be delivered freely as it is required for use.

I claim—

A case or box adapted for attachment to a sewing-machine, and provided with a receptacle, *l*, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARY E. ANTRIM.

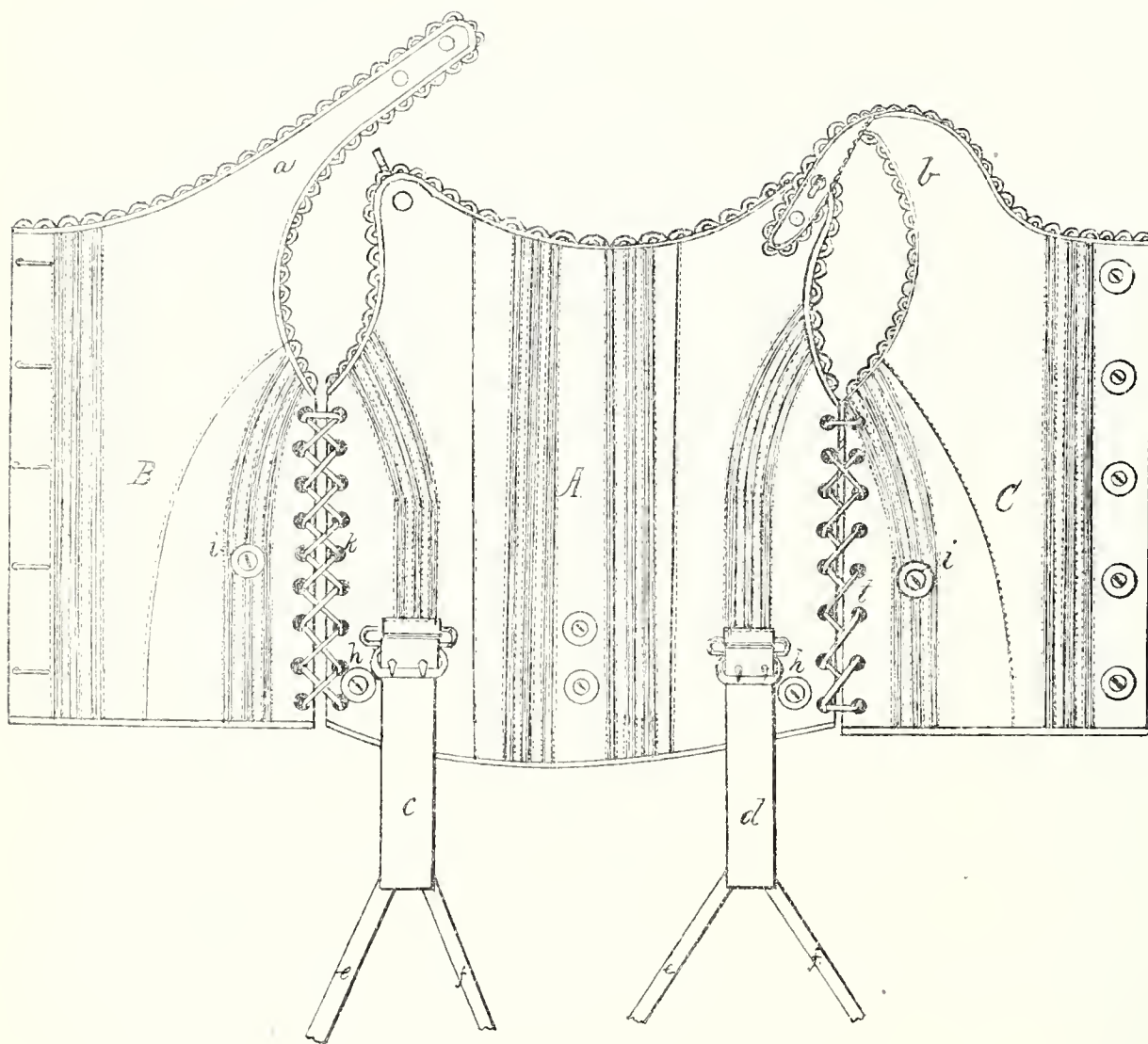
Witnesses:

WM. A. STEEL,
HARRY SMITH.

Linda Spigelmyer, Improvement in Corsets.

No. 121,210.

Patented Nov. 21, 1871.



Witnesses:

Parker & Co. Sewing, Jr.
J. R. Martin.

Inventor

Linda Spigelmyer.
By Wiedersheim & Norris.
her Atty.

UNITED STATES PATENT OFFICE.

LINDA SPIGELMYER, OF EASTON, PENNSYLVANIA.

IMPROVEMENT IN COMBINED CORSET AND SKIRT SUPPORTERS.

Specification forming part of Letters Patent No. 121,210, dated November 21, 1871.

To all whom it may concern:

Be it known that I, LINDA SPIGELMYER, of Easton, Northampton county, Pennsylvania, have invented a new and useful Combined Corset and Skirt Supporter, of which the following is a specification:

This invention consists of the combination and arrangement of several well-known parts in order to produce an adjustable and combined waist, skirt, drawers, and stocking supporter, the construction and joint operation of which will now be set forth in detail.

The corset, which I term the waist, is constructed as follows: A designates the front piece, which is made in the form shown, and corded in the center and at the sides to give it stiffness. B and C are the sides, also corded, and provided with buttons and button-holes, hooks and eyes, or some other such fastening, and are extended at *a* and *b* to form straps, which pass over the shoulders and are fastened by hooks and eyes to the top of the front piece A, and thus form sleeves. Strips of elastic material *c d* are secured by buckles to the lower end of the front piece, and pieces of tape *e f* are secured to the ends of the straps *c d*, and have loops on their lower ends, which are attached upon the stockings and constitute stocking-supporters. Upon the lower edge of the waist are arranged buttons *h h*, to which the drawers are attached and by which they are supported; and the skirts are likewise attached to the waist by engaging with buttons *i i* arranged thereon. Thus, by means of the elastic material *c d* and the tape *e f* hav-

ing the loops on their lower ends to button on the stockings, the latter are adjustably supported, and by means of the buttons *h h* and *i i* the drawers and skirt are supported.

This arrangement of parts enables me to support by the waist the skirts, drawers, and stockings and place the weight of all under garments upon the shoulders, thus obviating the unpleasant and unhealthy consequences of impeding the circulation by binding the loins, hips, and limbs with bands of elastic or other like material.

The sides composing the waist are secured to the front by means of lacings *k l*, which are passed through eyelets properly arranged on the edges of the parts; and the waist is so constructed that these lacings can be loosened or tightened to allow it to conform to the body of the wearer. It will thus be seen that the several parts are adjustable so as to be adapted to the size and length desired of the wearer.

The within is intended as an improvement upon my Letters Patent granted April 12, 1870, No. 101,934.

What I claim is—

As a new article of manufacture, a combined adjustable waist, skirt, drawers, and stocking supporter, constructed and arranged as herein shown and described.

To the above specification I have signed my name this 16th day of March, A. D. 1871.

LINDA SPIGELMYER.

Witnesses:

E. C. GIRKINGER,
M. E. KICHLINE.

(80)

Elizabeth O'Connor; Bee-Hive.

No. 119,991.

Patented Oct. 17, 1871.

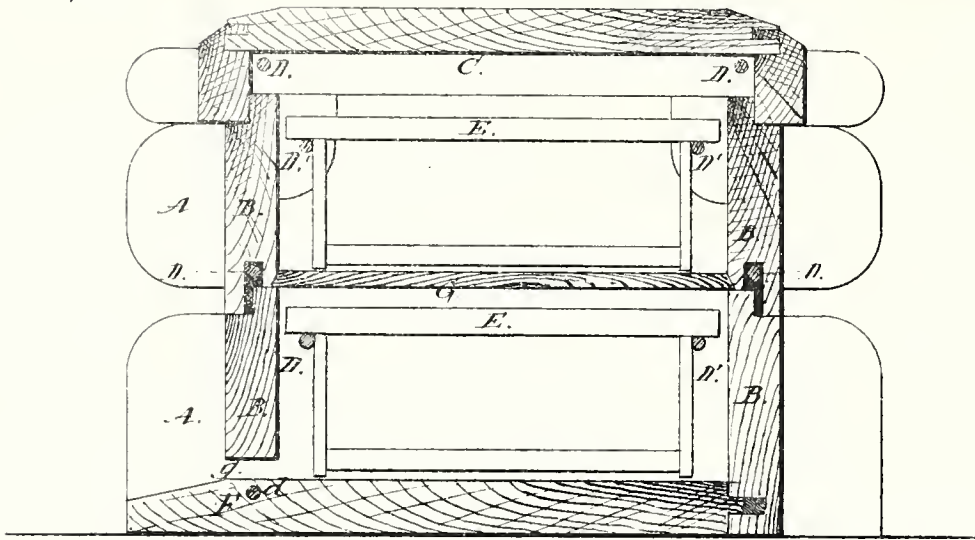


Fig. 1.

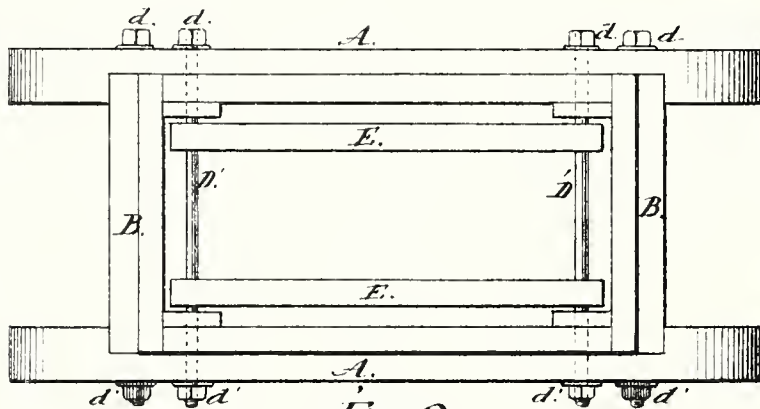


Fig. 2.

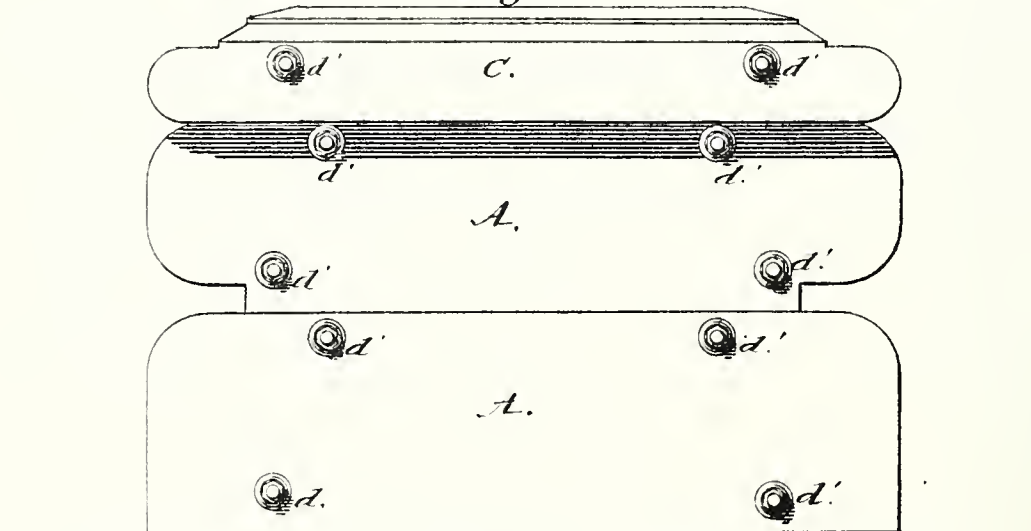


Fig. 3.

Witnesses,
J. H. Barton
J. C. Barton

Inventor;
Elizabeth O'Connor

UNITED STATES PATENT OFFICE.

ELIZABETH O'CONNOR, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BEE-HIVES.

Specification forming part of Letters Patent No. 119,991, dated October 17, 1871.

To all whom it may concern:

Be it known that I, ELIZABETH O'CONNOR, of the city of Philadelphia, State of Pennsylvania, have invented an Improvement in Bee-Hives, of which the following is a specification:

My invention relates to an improvement in the construction of hives for bees; and consists of a hive constructed in sections, and having the boxes composing these sections framed together with tongue and groove, or any known method of framing, and having the joints secured together by rods passing entirely through the hive longitudinally or transversely, which rods form, with nuts and screw-threads, complete screw-bolts.

In constructing my hive I use the tongue and groove-joint, which is, perhaps, the most complete method of jointing; but, instead of using screws or nails to secure these joints, I use rods of metal or other suitable material, having screw-threads in combination with heads, nuts, and washers, to form complete bolts to clamp together the sides and ends of the sections. In my hive I use four bolts or rods to a section, although more may be used, if necessary. The two lower bolts I use for the exclusive purpose of clamping the sides and ends together; but the two upper I use at a distance from the ends of the sections to serve as rests or bearings for the frames in which the honey-comb is formed, as well as to assist the lower bolts in clamping.

The advantages to be derived from this method of securing the joints of bee-hives are several and very important. Bee-hives, when acted upon by the elements, are liable to be opened in their joints, which fact is taken advantage of by moths and other insects destructive to bees to deposit their germ, which frequently proves, upon development, of serious consequences to the inmates of the hive. It is highly important also to have bee-hives constructed in such a manner as to retain as much of the animal heat as possible as a protection to the bees in winter from the cold, and to render more certain the hatching of the brood in the proper season. By means of my rods or bolts the joints of the hive may always be kept tight. Another advantage to be gained in using bolts is the ease and facility with which

a hive may be put together or separated without damage to the parts for repairs, and packed for transportation or storage. The upper rods, while they assist in securing the joints, also serve the important office of support to the frames, and offer but a slight bearing-surface for the deposit of propolis or bee-glue. When a broad bearing is given to these frames it is frequently the case that the adhesion is so great that the frames are broken and the comb damaged in the act of withdrawing the loaded frames. These upper rods serve also as guides in withdrawing or inserting the frames, and preventing thereby the crushing of the bees that may be hanging to them.

The rods used in my hive are cylindrical, although their bearing-surfaces for the frames may be of any form that will give the least bearing.

In the accompanying drawing, Figure 1 is a longitudinal section on line *x x*. Fig. 2 is a plan. Fig. 3 is a side elevation.

Similar letters of reference are used in corresponding parts in all of the figures.

The sections of my hive I form of the sides A and ends B, jointed together with tongue-and-groove joints. D D, &c., are rods or bolts which pass transversely through the sections, and form, together with the heads *d*, nuts and washers *d'*, and screw-threads on the ends of the rods, complete screw-bolts to clamp the joints snugly together. The top or cover to the hive C is also jointed together with tongue-and-groove joints, and clamped with screw-bolts. D' D', &c., are rods or bolts similar in form to rods D, but serve the double purpose of clamping the joints of the sections, and forming supports to the frames E. F is the bottom or floor of the hive, which is also framed with tongue and groove. The opening *g* is left between the floor and end B for the entrance and egress of the bees. The hive here illustrated and described is formed of two sections, one resting on the other, having rabbeted bearings, which form complete joints, and prevent a separation of the sections by any lateral movement. The hive may have more sections, if necessary, and the frames for the honey-comb may be the entire depth of the hive, if necessary. G is the honey-board, supported in a bevel-groove between the sections, but which may also be used

on top of the upper section. If desired, the sections of the hive may be united without the tongue-and-groove joints.

I claim as my invention—

A hive united by rods, and having each separate part detachable from the adjacent parts, in order that the hive may be taken to pieces and be laid flat for transportation, the joints be-

ing so formed that when the hive is set up the securing-rods will firmly unite the whole in one complete hive, as described.

ELIZABETH O'CONNOR.

Witnesses:

D. W. MARTON,
M. E. MARTON.

(9)

BETSEY ANN WORDEN.

Improvement in Car-Couplings.

No. 126,122.

Patented April 23, 1872.

Fig. 1.

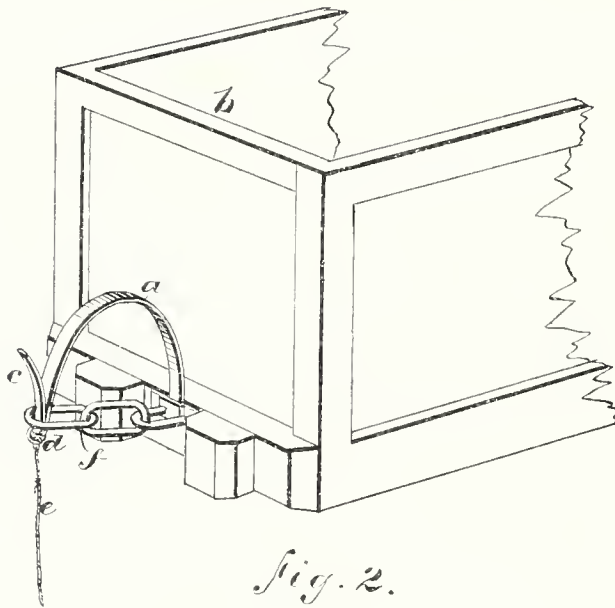
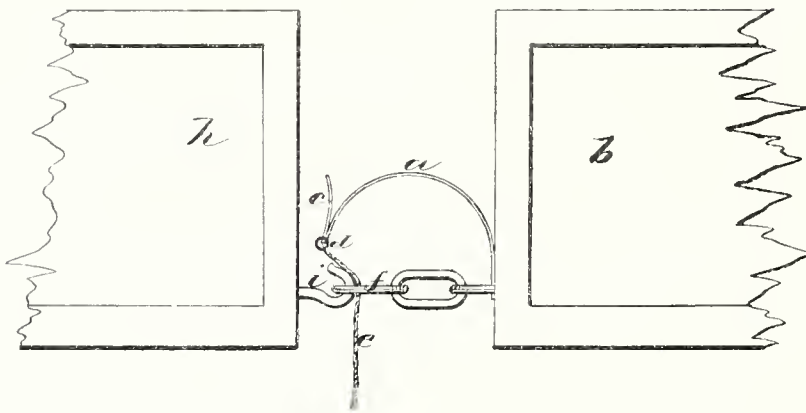


Fig. 2.



Witnesses.

C. F. Brown.
J. E. Worden.

Inventor.

Betsey Ann Worden,
by Geo. E. Brown.

Atty.

UNITED STATES PATENT OFFICE.

BETSEY ANN WORDEN, OF SCRANTON, PENNSYLVANIA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 126,122, dated April 23, 1872.

Specification describing a certain Improvement in Automatic Car-Couplings, invented by BETSEY ANN WORDEN, of Scranton, Luzerne county, Pennsylvania.

This invention relates to that class of automatic car-couplings whose great merit is that they do not endanger human life. The invention consists in the combination of an elastic curved arm extending forward from the end of a car, and so constructed as to uphold the outer end of a chain or link whose inner end is attached to the car beneath the said arm, the principle being that when the arm aforesaid is struck by an approaching car the chain or link is disengaged by the concussion, and falls upon a hook attached to said approaching car, thus coupling it with the car to which the chain is secured.

Figure 1 is a perspective view, and Fig. 2 a side elevation.

a is the elastic arm aforesaid, the same being attached at one extremity to the end of a car, *b*, in any sufficient manner, and extending outward to any suitable distance, said arm having at its outer end a finger, *c*, projecting upward and forward. At the junction of the

arm *a* and finger *c* is a ring, *d*, hung to the arm, to which ring a cord, *e*, is fastened. The cord *e* passes through the outer link of a chain, *f*, whose inner link is secured to the car *b* at a point directly beneath the arm *a*. The function of the cord *e*, as shown, is to draw the end link *f* up over the ring *d*, by means of which said link is upheld on the arm *a*; but, when the finger *c* is struck by the approaching car *h*, it forces back the arm *a*, withdrawing the ring *d* from the chain *f*, so that the latter falls upon the hook *i* of the car *h*, thus automatically coupling the two cars. The chain *f* may be manipulated without the intervention of the cord *e*, if preferred.

I claim as my invention—

1. The arm *a*, provided with the finger *c*, and combined with the ring *d* and chain *f*, as and for the purpose described.

2. The combination of the foregoing with the cord *e*, as specified.

BETSEY ANN WORDEN.

Witnesses:

DR. WRIGHT,
FREDK. FULLER.

EMMA L. COURTNEY.

Improvement in Mounting Pictures.

No. 128,125.

Patented June 18, 1872.

Fig 1.

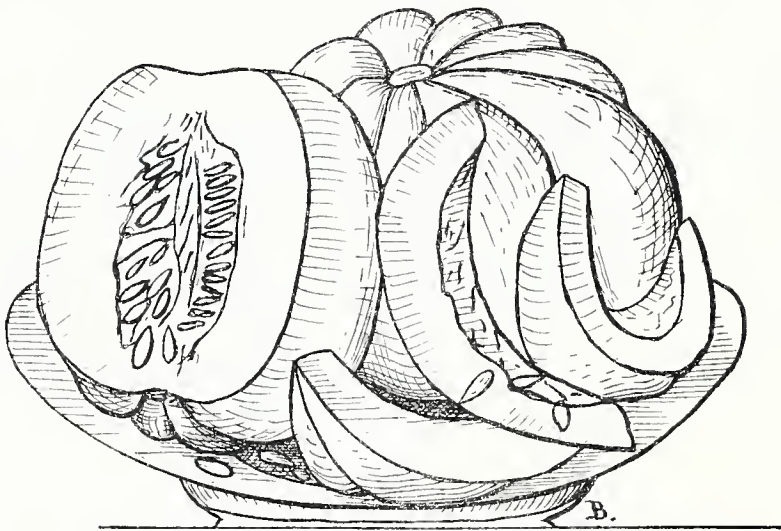
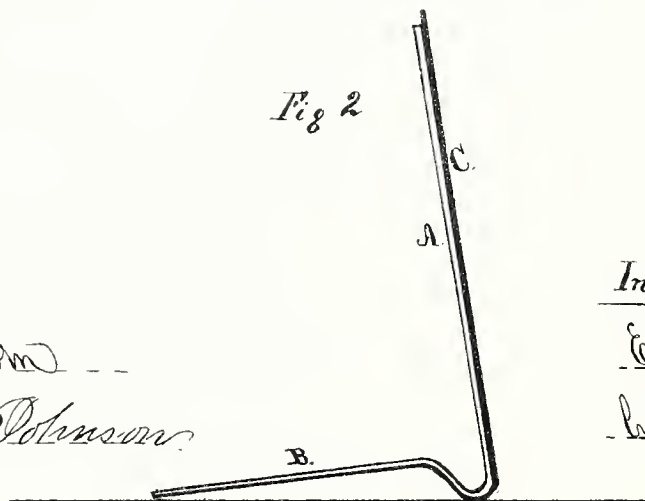


Fig 2



Witnesses

Edward H. Osborn

Edward H. Osborn

Inventor

Emma L. Courtney

By her Atty. J. A. Osborn

UNITED STATES PATENT OFFICE.

EMMA L. COURTNEY, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MOUNTING PICTURES.

Specification forming part of Letters Patent No. 128,125, dated June 18, 1872.

Specification describing certain Improvements in Mounting and Supporting Pictures, invented by EMMA L. COURTNEY, of Philadelphia, Pennsylvania.

This invention consists in mounting or holding a picture in such a manner that the frame may be dispensed with, and the picture have, at a distance, the appearance of the original article, as fruit, flowers, &c., the subject of the picture.

The picture represented in the accompanying drawing has for its subject a plate of muskmelons.

Fig. 1 shows a front elevation, and Fig. 2 a side elevation.

The picture C is first properly painted upon the canvas, and its outline is cut out, or the canvas surrounding it cut away, so as to leave the picture in relief. It is then mounted upon the plate A, which is also cut to agree with the outline, and is held in position at the

proper angle by the bottom part or base B of the plate A. The plate A can be adjusted to stand at any angle with the base B by bending the latter at the angle or part where the two meet.

As thus made the picture has, at a distance, the appearance of the subject itself, and a new and beautiful article is produced, which renders the use of a frame unnecessary.

Claim.

A cut-out picture mounted upon a plate, which forms a stand, and capable of angular adjustment, as a new and improved article of manufacture, named "pictures without frames," and to be used for advertising purposes as well as ornaments.

EMMA L. COURTNEY.

In presence of—

J. H. DURKEE,
H. S. SANFORD.

CHARLOTTE A. JOHNSON.

Improvement in Screens for Wash-Stands, &c.

No. 129,667.

Patented July 23. 1872.

Fig. 1.

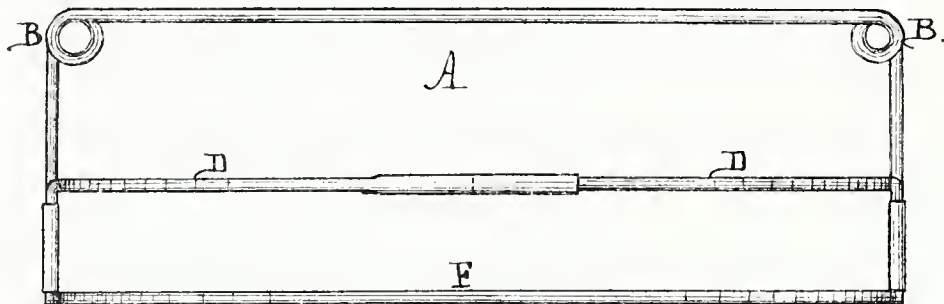


Fig. 2.

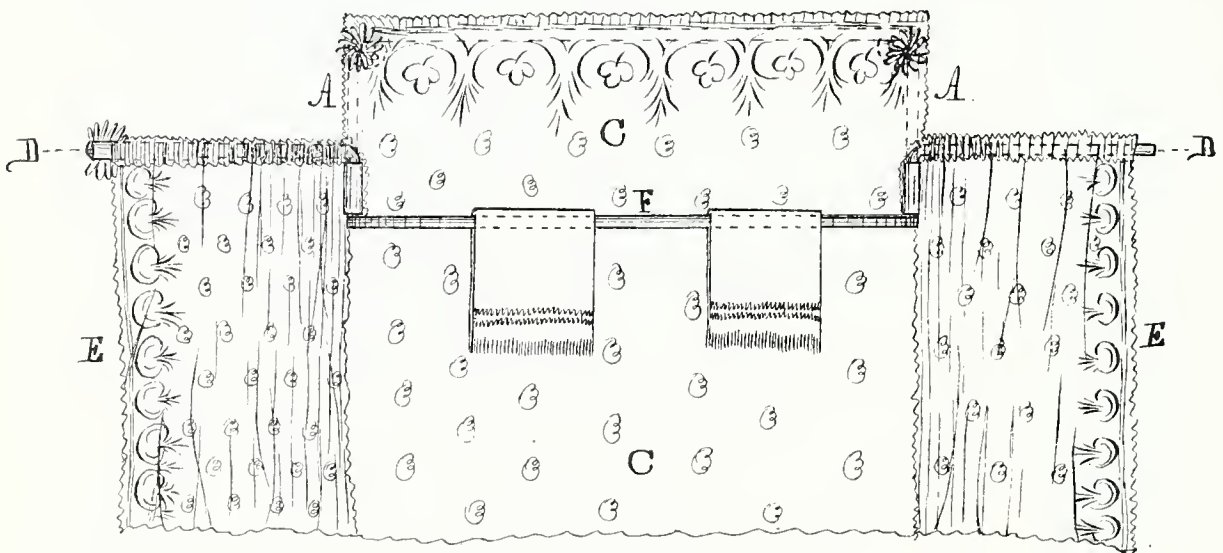
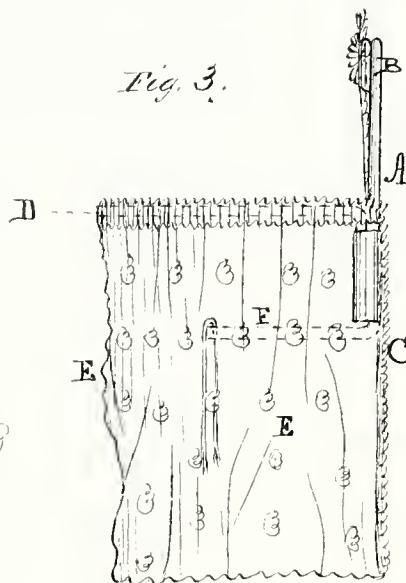


Fig. 3.



Witnesses:
Jacob C. Schiedt
Alfred C. Savidge

Inventor:
Charlotte A. Johnson
by John A. Diederichs
Atty.

UNITED STATES PATENT OFFICE.

CHARLOTTE A. JOHNSON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SCREENS FOR WASH-STANDS, &c.

Specification forming part of Letters Patent No. **129,667**, dated July 23, 1872.

To all whom it may concern:

Be it known that I, CHARLOTTE A. JOHNSON, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Screen for Wash-Stands, Commodes, &c.; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand and use the same, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a front view of the supporting-frame and other parts, the skirts or screen being removed. Fig. 2 is a front view of the completed device in an open state, and Fig. 3 is a side view.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a device for covering wash-stands, commodes, &c., and preventing the soiling of the wall or other place by splashing, &c. It consists in a light frame for attachment of the back skirt, supporting the arm or arms of the front skirt, and affording means for securing or hanging the screen to the wall or elsewhere. It also consists in adapting a portion of the frame as a towel-rack.

Referring to the drawing, A represents a frame, which is constructed of wire, in order to be light, durable, simple, and cheap, for the purpose intended. B represents eyes formed with the frame, whereby the latter may be hung or secured to the wall or other intended place. The back skirt C will be sewed or otherwise attached to the frame, and is designed to protect the place over and behind the wash-stand, commode, toilet-table, or other like articles. To the side or sides of the frame I hinge an arm or arms, D, which are constructed of wire, and adapted to swing outward or upward.

When said arm or arms are closed or lowered, the front skirt E, secured thereto, may be made to cover the pitcher, basin, cups, &c., on the wash-stand, commode, or other places and articles relatively to the intended use of the screen. When the articles are required for use the support D is swung up or out, and thus the said articles are exposed to view and accordingly accessible. Should said support be opened outwardly, the skirt or skirts thereon will serve to protect the wall or place at the side or sides of the back skirt.

The lower portion of the frame is formed into a towel-rack, F, which will be in front of the back skirt (when applied) and behind the front skirt. It will be seen that the towels, &c., may be hung on the rack without interfering with the other parts of the screen, and if desired, when the support is closed or lowered, said towels may be removed without disturbing the front skirt, by simply reaching over the latter.

If the support D consists of two arms, their ends may be locked to prevent accidental opening thereof.

The device will be found to be useful and ornamental.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The supporting-frame A and the adjustable or jointed support D, substantially as and for the purpose described.

2. The towel-rack F, in combination with the frame A of the screen, substantially as and for the purpose described.

The above signed by me this 14th day of December, 1871.

CHARLOTTE A. JOHNSON.

Witnesses:

JOHN A. WIEDERSHEIM,
J. W. HAMPTON, Jr.

UNITED STATES PATENT OFFICE.

HARRIET Z. SILL, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HERSELF
AND ATLEE V. COALE, OF SAME PLACE.

IMPROVEMENT IN COSMETIC COMPOUNDS.

Specification forming part of Letters Patent No. 124,018, dated February 27, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, HARRIET Z. SILL, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Cosmetic Compound; and I do hereby declare the following to be a full, clear, and exact description thereof.

In the preparation of cosmetics, heretofore, white lead or other like article, has been commonly employed as the base. This article, it is well known, is exceedingly deleterious in its action on the skin.

The object of my invention is to prepare an equally good or better cosmetic, in which the use of white lead or other like injurious ingredient shall be dispensed with, and for such purpose I substitute what is known to the trade as "terra alba" for white lead, and prepare my improved cosmetic, as hereinafter set forth.

To enable others skilled in the art to make and use my improvement, I will proceed to describe the same.

For materials I take, terra alba, eight ounces, by weight; glycerine, one-fourth drachm, by

measure; carmine, one-half grain by weight, and a small but sufficient quantity of bergamot or other essential oil for flavoring purposes, if a flavoring is desired. These I grind together or mix thoroughly, and then add about five ounces, by measure, of water.

The proportions above named may be varied somewhat without departing from the scope of the invention. The cosmetic thus prepared is harmless in its effect on the skin, and equally as efficacious as the preparations heretofore employed for like uses.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The composition hereinbefore described, and in the proportions indicated, as a cosmetic.

2. "Terra alba" as a substitute for metallic oxides in the preparation of cosmetic compounds.

In testimony whereof I, the said HARRIET Z. SILL, have hereunto set my hand.

HARRIET Z. SILL.

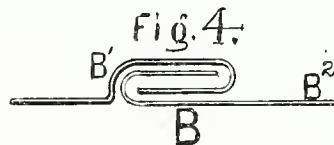
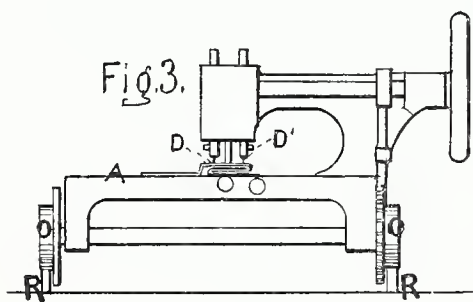
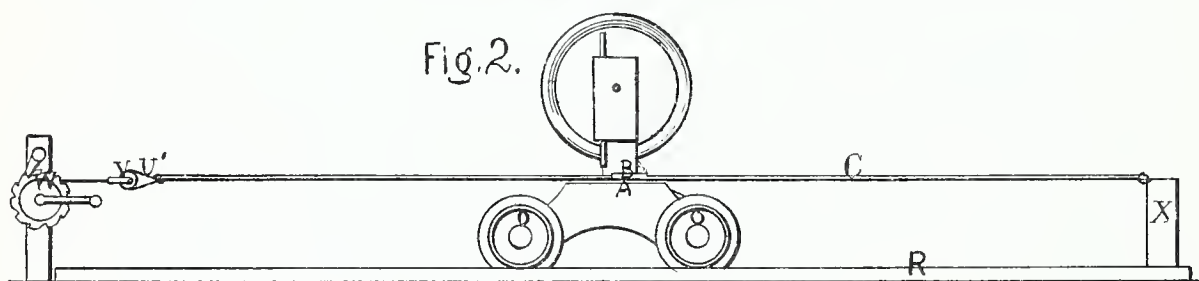
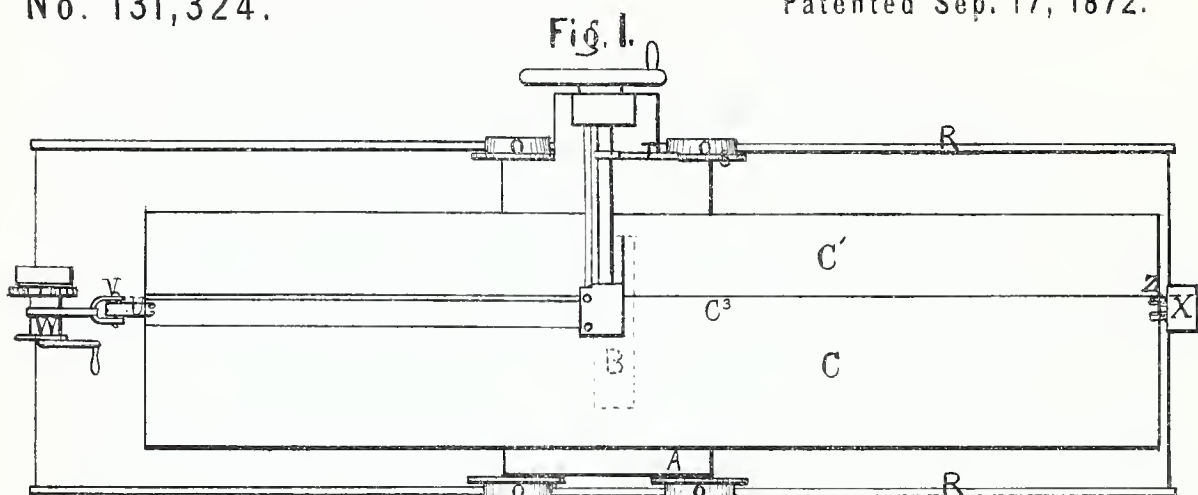
Witnesses:

J. P. FLEMING,
A. MILLAR.

KATE C. BARTON.
Sewing-Machine.

No. 131,324.

Patented Sep. 17, 1872.



WITNESSES.

Thomas H. Norton
Thomas H. Norton

INVENTOR,

Kate C. Barton

UNITED STATES PATENT OFFICE.

KATE C. BARTON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **131,324**, dated September 17, 1872.

To all whom it may concern:

Be it known that I, KATE C. BARTON, of the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Sewing-Machines adapted to sewing sails, awnings, &c.; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing and letters of reference marked thereon.

My invention consists in an arrangement of two or more needles and other necessary sewing parts, with a device for folding or interlocking the edges of two pieces of fabric to be stitched in parallel lines, the whole operating to produce seams of great strength.

Figure 1 shows a plan of this machine; Fig. 2, a side elevation; Fig. 3, a front elevation. All of the above figures are on a scale one and one-half inch per foot. Fig. 4, the creasing device, drawn of full size. Fig. 5 shows a full-sized section of the seam produced.

The same letters of reference apply to the same parts in the several figures.

A is the bed or cloth-supporting table of the machine, on which is fastened B, a guide or creaser formed of two hooks, B¹ and B², made larger at the front end, so as to facilitate the entrance of the pieces of cloth C and C¹. The cloth, over which the creaser B passes, is bent into folds C² and C³, which, interlocking, resemble, in cross-section, the joint known by plate-metal workers as a locked joint or double seam. D and D' are needles, which simultaneously make two rows of stitches through the folded cloth as it passes out at the back of the creaser B.

The arrangement for stitching may be any of those now in use for producing either a chain-stitch, by means of a looper under the table, or shuttles containing bobbins such as are used in lock-stitch sewing-machines may be employed. The particular arrangement of this part of the mechanism not forming an essential component of this invention, any of the known forms of stitching apparatus will comply with the requirements of this part of my invention.

W is a windlass for straining or stretching the edges of the two pieces of cloth C and C¹ forming the seam attached to the ends thereof, the other ends being secured to a post, X, or other fixed object.

The purpose of stretching the cloth in this operation is three fold: First, to relieve the operator and machine from the weight of the cloth; second, to avoid puckering of either piece of cloth from throwing undue strain on the tighter piece when the sail is in use; and, third, to prevent the sewing of stitches tighter than the cloth, and the consequent breaking thereof when the seam is subjected to longitudinal strain in use.

The machine is supported on wheels O, resting on rails R, on which it has a progressive movement in the intervals of time between the making of the stitches, imparted to it by a feed motion, consisting, as I have shown, of a ratchet-wheel, S, and pawl T, or by any of the feed-motions in common use in sewing-machines.

A cord or tape, U', is attached to the windlass, and, passing over a roller, V, through the creaser from back to front, has each end secured by pinning or basting to one of the front corners of the seam to be united. The rear corners are then secured to the post X by tapes Z, and the windlass W tightened up so as to stretch both the pieces C and C¹ of the cloth evenly at the edges forming the seam.

The needles D and D' and shuttles M and M' are supplied with thread, and the machine being put in motion passes the creaser B from the end toward the windlass W toward the post X over the edges C and C¹ of the cloth, and folds them, as shown in the section in Fig. 5, in which shape they are firmly stitched by the needles D and D', forming a substantial seam.

The form of this machine may be varied without changing its essential character, as, for instance, more needles can be used, and more than two lines of stitching produced.

The cloth may be strained to a frame bearing the windlass, and the frame and cloth moved instead of the machine; but I deem it preferable to move the machine, especially in

the ease of large sails. All of these modifications, I believe, are included in my invention.

I do not claim, separately, any of the instrumentalities I have described; but

What I do claim as my invention, and desire to secure as such by Letters Patent, is—

1. The combination of the duplex or multiple arrangement of needles and stitching devices traveling on ways with the guides B¹ and B², as and for the purpose set forth.

2. The windlass W, roller V, cord U', and post X, in combination with a traveling sewing-machine guided upon rails, and operating as described.

KATE C. BARTON.

Witnesses:

S. LLOYD WIEGAND,
THOMAS H. NEILSON.

JANE ANN BRYANT.

Devices for Removing Snow from Railways.

No. 145,623.

Patented Dec. 16, 1873.

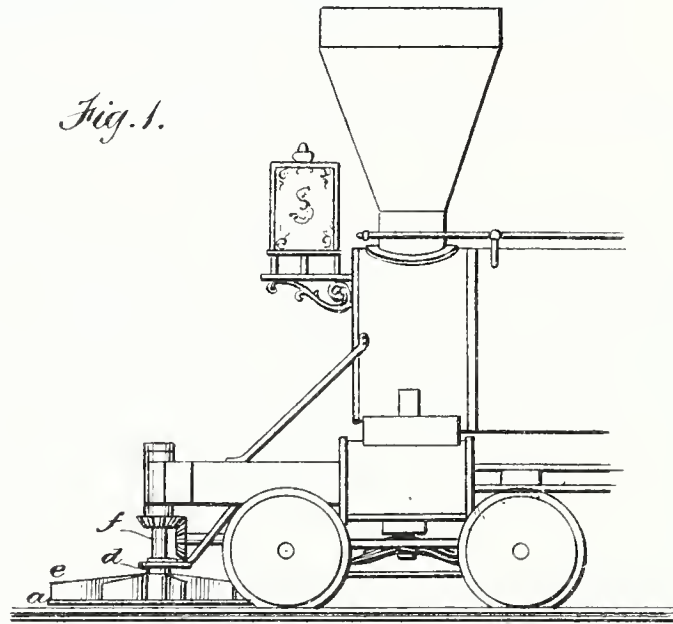
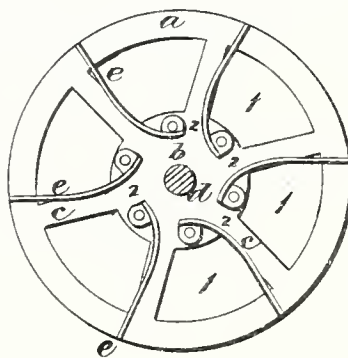


Fig. 2.



WITNESSES
C. H. Brown.
Minella Church. By

INVENTOR
Jane Ann Bryant.
Will E. Ellsworth
her Attorneys.

UNITED STATES PATENT OFFICE.

JANE ANN BRYANT, OF POTTSVILLE, PENNSYLVANIA.

IMPROVEMENT IN DEVICES FOR REMOVING SNOW FROM RAILWAYS.

Specification forming part of Letters Patent No. **145,623**, dated December 16, 1873; application filed November 12, 1873.

To all whom it may concern:

Be it known that I, JANE ANN BRYANT, of Pottsville, in the county of Schuylkill and State of Pennsylvania, have invented a new and useful Improvement in Snow-Wheels; and I do hereby declare the following specification to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, which forms a part of this specification.

My invention relates to the class of wheels or shovels such as are used for removing snow from railroad-tracks or streets; and the object of the invention is to produce a more practical and thoroughly working device than has heretofore been made, and one that is simple in construction and not easy to get out of order, and that can be adjusted to and operated by any vehicle where a horizontal rotary motion can be communicated to it.

Figure 1 is a side view of my wheel as applied to a locomotive-engine. Fig. 2 is a top view of my wheel.

a is the rim of the wheel, and *b* is the base, connected by means of the flat spokes *c*. Rising from the base *b* is the hollow stem *d*, in which any shaft may be placed and secured by well-known means to rotate my wheel.

The foregoing-named parts are made integral; but it is evident that they may be made separate, and bolted or screwed together in any ordinary way, without changing the character of my wheel or invention.

e are the paddles or flukes of the wheel, which are rigidly or adjustably attached to the base and rim of the wheel, as shown in

Fig. 2. They rise vertically from the wheel, and are all curved in the same direction, for the reasons hereinafter set forth. *f* is the central shaft, the lower end of which is held tightly in the socket *d* of the wheel. By means of this shaft the wheel is supported a slight distance above the track to be cleaned of snow, and rotary motion is applied to it, either through the ordinary gearing, as shown, or by a band and pulleys.

In operation, the wheel turns from left to right, and as it is carried along the forward spaces between the paddles become filled with snow, and the form of these paddles is just such as will take the snow and throw it laterally, and thus discharge it at the proper point and time to produce the best results with the least power.

The spaces 1 are of considerable advantage, for they allow the wheel to clear itself, as will be found in practice; also, the ways 2 assist in producing the same end.

I do not wish to limit myself to any particular means for carrying or rotating my wheel, for it is evident that such is not material to the operation of my invention.

What I claim, and desire to secure by Letters Patent of the United States, is—

The snow-wheel consisting of the base *b*, rim *a*, paddles *e*, spokes *c*, and socket *d*, constructed as described, for the purpose set forth.

JANE ANN BRYANT.

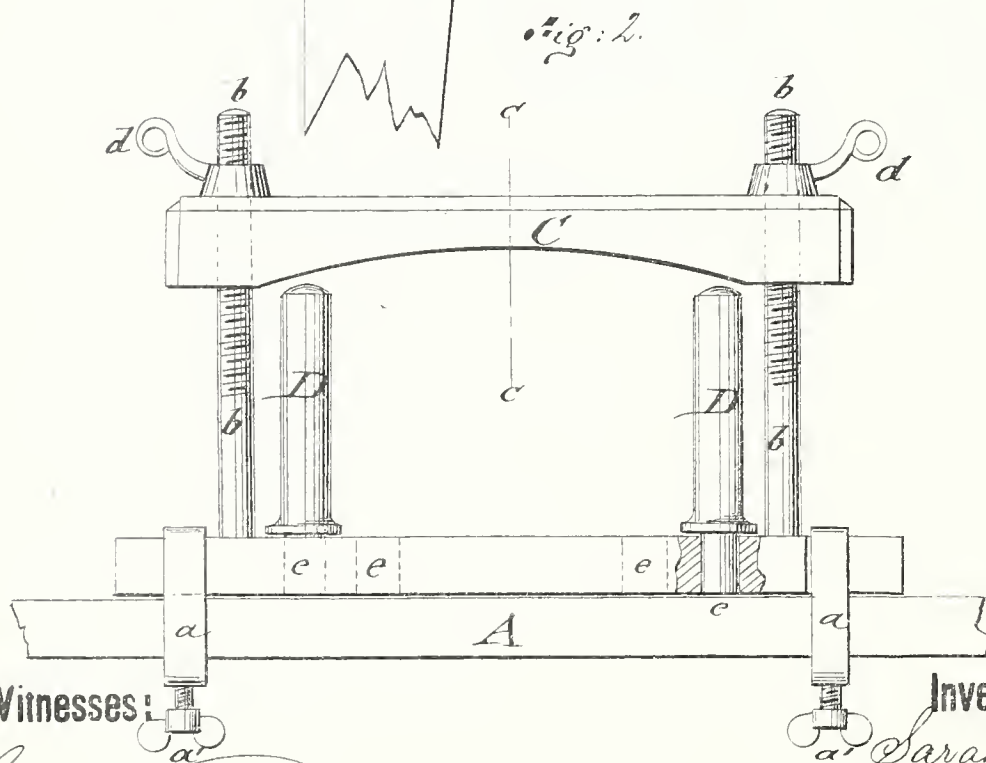
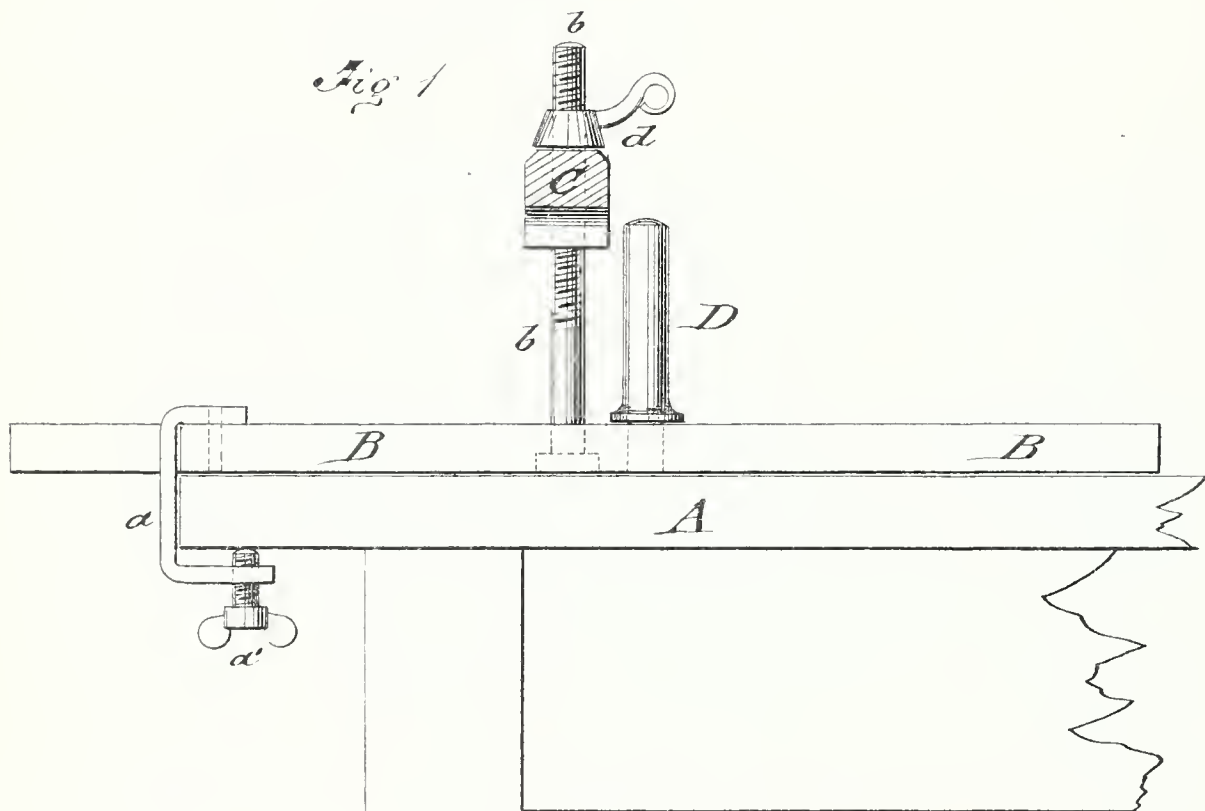
Witnesses:

DAN. L. KREBS,
JOHN HERBERT.

SARAH BEISSEL.
Meat-Holders.

No. 145,329.

Patented Dec. 9, 1873.



Witnesses:

Chas. Nida
Alvin F. Roberts

Inventor:

Sarah Beissel
Per *Munn*
Attorneys.

UNITED STATES PATENT OFFICE.

SARAH BEISSEL, OF SHAMOKIN, PENNSYLVANIA.

IMPROVEMENT IN MEAT-HOLDERS.

Specification forming part of Letters Patent No. **145,329**, dated December 9, 1873; application filed August 30, 1873.

To all whom it may concern:

Be it known that I, SARAH BEISSEL, of Shamokin, in the county of Northumberland and State of Pennsylvania, have invented a new and Improved Meat-Holder, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation, partly in section, on the line *c c*, Fig. 1, of my improved meat-holder board as applied to a table; and Fig. 2, a front view of the same.

Similar letters of reference indicate corresponding parts.

The object of my invention is to furnish to hotels, restaurants, boarding-houses, and families an improved meat-holder, by means of which hams and other meats may be regularly and easily cut with greater convenience and dispatch. My invention consists of a board which is applied with set-screws to a table, and carries on vertical screw-bolts a concave cross-bar, which is screwed down on the meat to be held in place, supporting it also sidewise by adjustable rollers.

In the drawing, A represents the table or other article of furniture, to which the meat-board is rigidly applied by clamps and set-screws *a a'*. Two vertical screw-bolts, *b*, are set firmly into the board, made of wood or

iron, and carry the lateral cross-bar C. Cross-bar C is concave at the lower side, and pressed, by the thumb-screws *d*, on the meat placed on the board B between the bolts *b*. Vertical guide-rollers D are placed in holes *e* of the board and retain the meat sidewise. Rollers D are placed to the rear of and between the bolts *b*, and set into any of the holes *e*, as the thickness of the meat requires. The meat is thereby held firmly at the sides and top, and may, therefore, conveniently be cut into the nicest slices, and also easily be fed forward between rollers D by merely releasing cross-bar C and fastening the same again.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The meat-holder, consisting of a board, B, having vertical screw-bolts *b*, with lateral cross-bar C, which is pressed on the meat by thumb-screws *d*, and vertical side rollers D adjustable in holes *e* of the board, to clamp the meat firmly and feed it for cutting, substantially as specified.

SARAH BEISSEL.

Witnesses:

J. ZIMMERMAN,
GEORGE B. LINTON.

S. H. CRUMP.
Corpse Coolers.

No. 141,331.

Patented July 29, 1873.

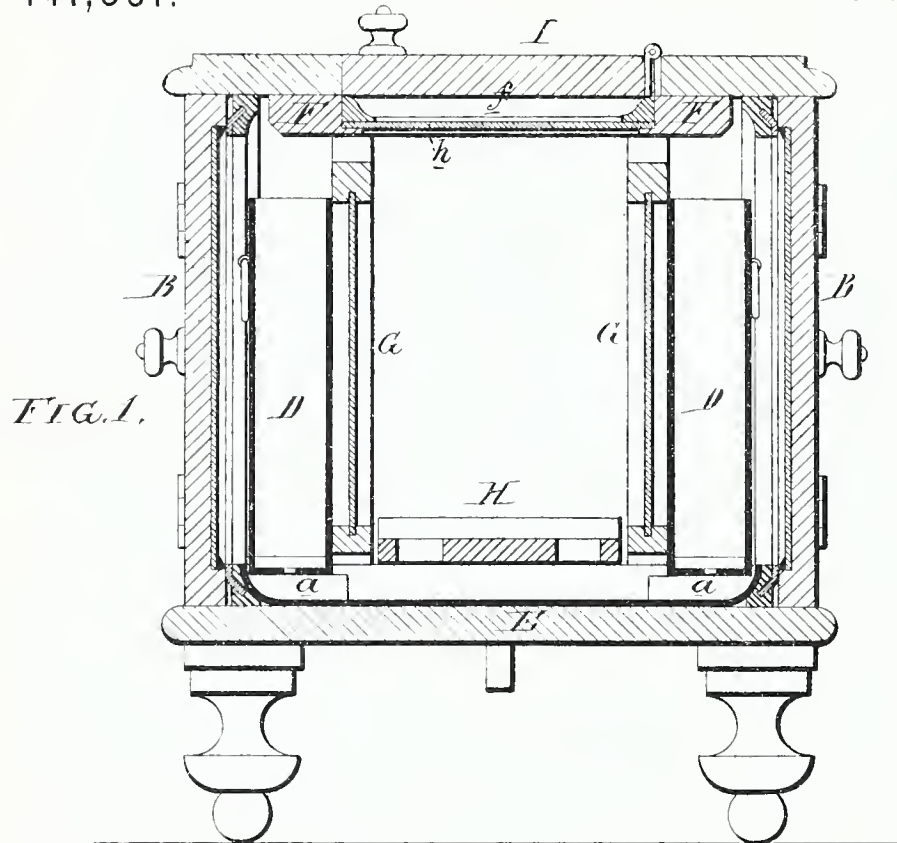
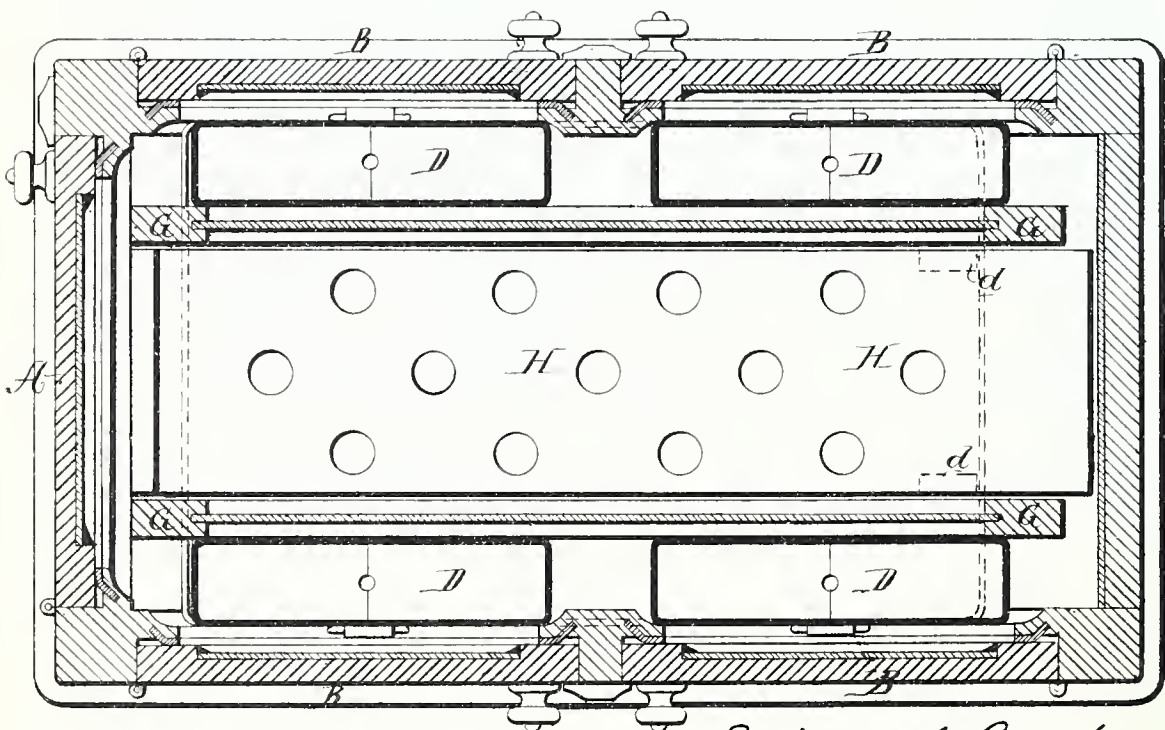


FIG. 2.



Witnesses, Harry Smith
Thomas McWhain

Savilla A. Crump
by her attys.
Havens and Son

UNITED STATES PATENT OFFICE.

SAVILLA H. CRUMP, OF READING, PENNSYLVANIA.

IMPROVEMENT IN CORPSE-COOLERS.

Specification forming part of Letters Patent No. **141,331**, dated July 29, 1873; application filed April 30, 1873.

To all whom it may concern:

Be it known that I, SAVILLA H. CRUMP, of Reading, Berks county, Pennsylvania, have invented certain Improvements in Corpse-Preserving Cases, of which the following is a specification:

The object of my invention is the efficient preservation of corpses by means of a case constructed in the peculiar manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a transverse section of the corpse-preserving case, and Fig. 2 a sectional plan view of the same.

The corpse-preserving case consists of an oblong box, having at one end a door, A, which can be closed and secured after the admission of the corpse. At each side of the box are two doors, B B, for the introduction of metal cases D, which contain the freezing-mixture, and which rest on strips *a* secured to the bottom E of the box. Extending nearly from end to end of the box are two partitions, G G, the upper edges of which are a short distance from the top F of the box, and the lower edges a similar distance from the bottom E of the same. Between these partitions is a perforated platform, H, on which the corpse is placed, and which is furnished at one end with rollers *d d*, bearing on the bottom E of the box, so that the said platform and the corpse may be readily withdrawn. The bottom of the box is so lined with metal as to form a reservoir for receiving the water which drips from the vessels D, the latter being perforated at the bottom to permit the water to escape into the said reservoir, from which it may be drained at pleasure by any suitable faucet connected with a hose. In the top of the box is an opening, *f*, which is entirely closed by a substantial plate, *h*, of glass, the latter being covered when necessary by a lid, I, hinged to one edge of the said opening *f*. Each partition G consists mainly of glass secured to a light frame, and each door B, as well as the closed end of the box and the door A, is lined

with glass, so that when all the doors are closed the whole inside of the box is of glass, but little wood, such only as is necessary to retain the glass, being exposed in the interior of the box. This glass lining not only insures cleanliness, but it aids the freezing-mixture to refrigerate the interior of the box and to maintain it in the cold state, which could not be attained in an ordinary wood-lined or even metal-lined box.

The relative positions of the vessels D, doors B, and partitions G permit a thorough circulation of air within the box, the air passing over and under the partitions and being brought into contact with the frigid sides of the vessels D and with the equally frigid plates of glass with which the doors are lined, or with the glass of the partitions G.

An important feature of my invention is the facility with which the vessels D containing the freezing-mixture can be withdrawn to be replenished and reintroduced into the box without disturbing the contents of the same.

I do not claim the perforated platform and its rollers; but

I claim—

1. A corpse-preserving case in which the boxes containing the freezing-mixture are separated by partitions from the central chamber but are in communication therewith, substantially as described.

2. The combination, with the corpse-preserving case, of longitudinal partitions G, formed wholly or partially of glass, and separating the interior of the said case into central and side chambers, as specified.

3. The combination of the ice-boxes D, the partitions G, and the doors B in the sides of the case opposite the ice-boxes.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAVILLA H. CRUMP.

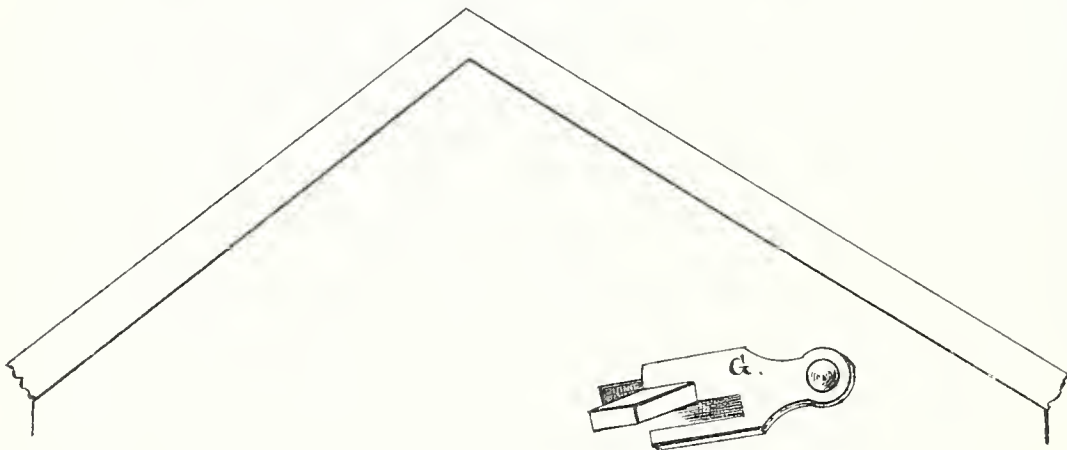
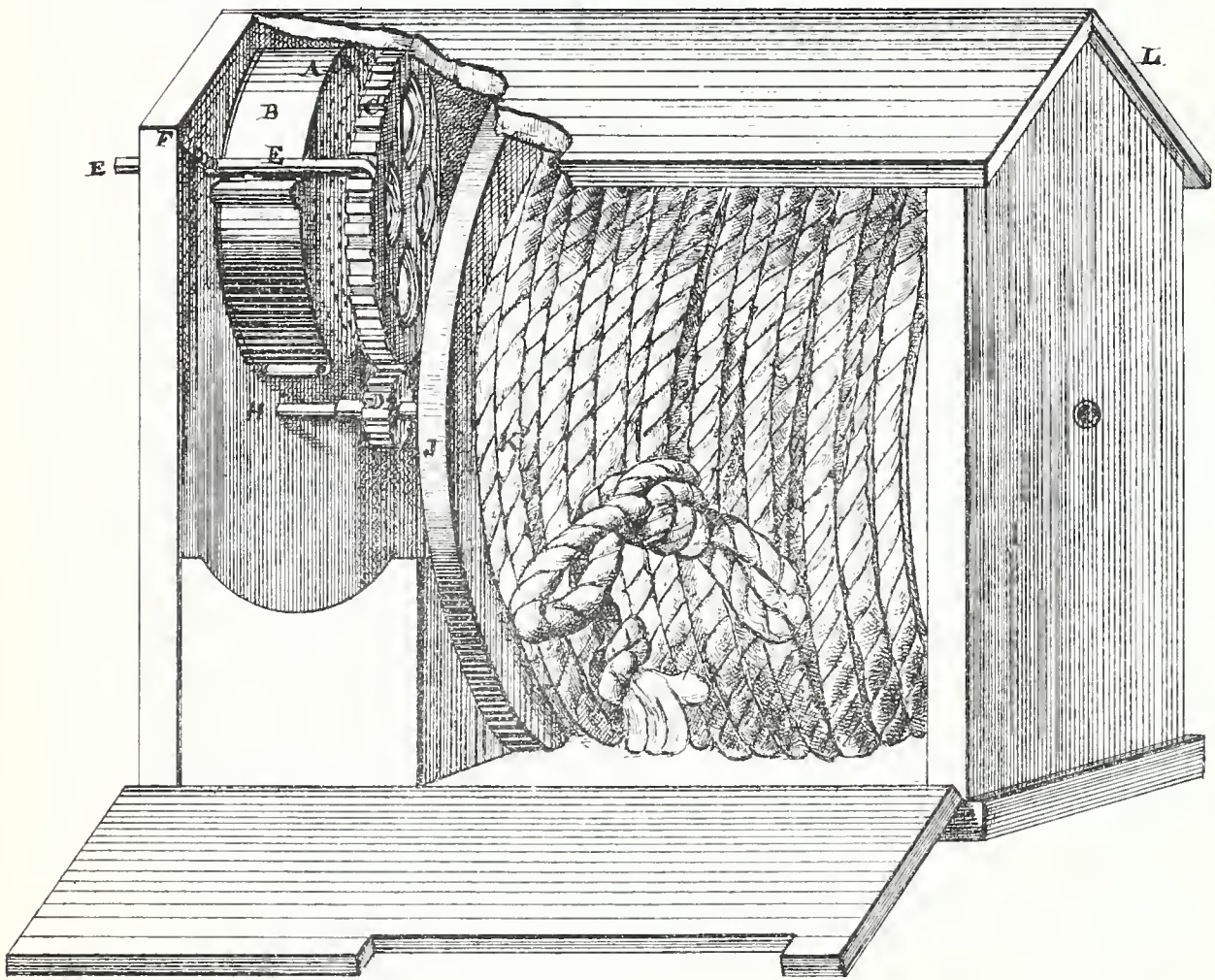
Witnesses:

WM. A. STEEL,
HUBERT HOWSON.

CAROLINE ROSENTHAL.
Reels for Clothes-Lines.

No. 141,015.

Patented July 22, 1873.



Witnesses.

Edm. F. Brown,
H. S. Miller.

Inventor

Caroline Rosenthal.
By her Atty. J. F. Reigart.

UNITED STATES PATENT OFFICE.

CAROLINE ROSENTHAL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN REELS FOR CLOTHES-LINES.

Specification forming part of Letters Patent No. **141,015**, dated July 22, 1873; application filed February 21, 1873.

To all whom it may concern:

Be it known that I, CAROLINE ROSENTHAL, of the city of Philadelphia and State of Pennsylvania, have invented a new and useful Improved Reel for Clothes-Lines; and I do hereby declare the following to be an exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon making a part of this specification, in which—

Figure 1 represents a perspective view of the reel and its operating devices. Fig. 2 exhibits the catch or fastening on the outside of the box.

The nature of my invention consists in the arrangement and combination of the coiled spring with its regulating-box, spur-wheel, pinion-wheel, lock, spiral spring, and pivoted catch on the outside. The object of my invention consists in preserving the clothes-line from injury by the weather; keeping it from obstructing the yard; keeping the line clean.

A represents a coiled spring (inclosed in its metallic and regulating box B) attached to the spur-wheel C, that operates the pinion D, that drives the shaft H, that revolves the reel J, upon which the clothes-line K is wound.

As the rope or line is drawn out of the box L it revolves the reel with the coiled spring

A, at the same time winding up the spring A. The rope is then fastened or hooked in any part of the yard, ready to hang the clothes upon; and when the rope is unhooked it is drawn into and wound upon the reel by the operation of the coiled spring. The lever or catch E is dropped into the spur-wheel C to lock the reel and spring A when a sufficient length of line has been drawn out. This lever is provided with a spiral spring, F, to hold the front end of the lever E firmly between the teeth of the spur-wheel to lock the machine. The opposite end of the lever E is fastened on the outside of the box L by a pivoted and slotted catch, G, that holds the lever permanently to its place until shifted to allow the reel to be operated when required.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of coiled spring A, box B with its spur-wheel C, pinion-wheel D, catch E, provided with a spiral spring, F, and slotted pivoted catch G, when arranged and combined with the reel, as herein described, and for the purposes set forth.

CAROLINE ROSENTHAL.

Witnesses:

JOHN NICHOLLS,
CHAS. VANHORN.

ELLA G. HALLER.
Fruit-Jars.

No. 140,916.

Patented July 15, 1873.

Fig. 1.

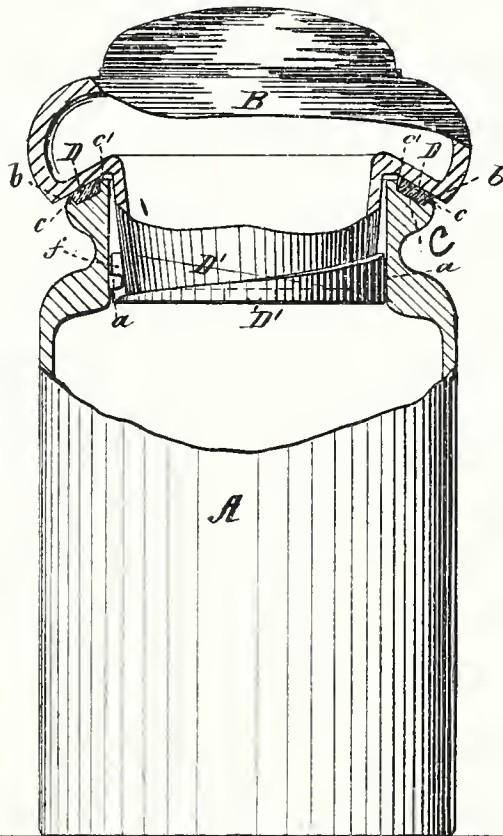


Fig. 3.

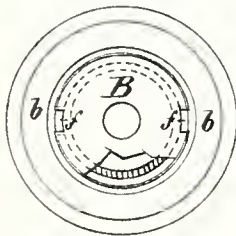
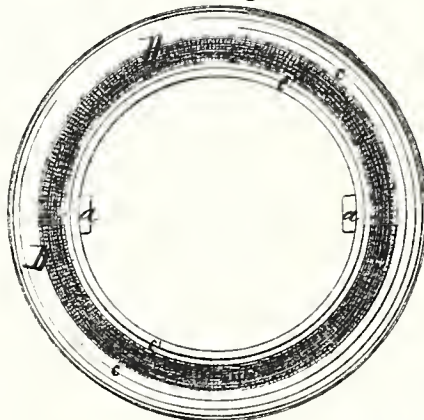


Fig. 2.



Witnesses:
G. Mathias
John Kemon

Inventor:
Mrs Ella G. Haller
Per *[Signature]*
Attorneys.

UNITED STATES PATENT OFFICE

ELLA G. HALLER, OF CARLISLE, PENNSYLVANIA.

IMPROVEMENT IN FRUIT-JARS.

Specification forming part of Letters Patent No. **140,916**, dated July 15, 1873; application filed June 25, 1873.

To all whom it may concern:

Be it known that I, Mrs. ELLA G. HALLER, of Carlisle, in the county of Cumberland and State of Pennsylvania, have invented a new and Improved Fruit-Jar; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a side elevation partly broken away. Fig. 2 is a top view with the stopper out of the jar. Fig. 3 is a bottom view of stopper.

The invention relates to fruit-jars; and consists in forming a groove for the packing on the outside of body, while the cover is constructed with a lip or flange that overlaps the groove and packing, this construction allowing each to be blown in a single piece, whereby the liability to fracture which exists where the neck is blown separately and applied in a plastic state, is entirely obviated, and whereby a jar of much greater simplicity and efficiency is secured.

In the drawing, A represents the body of a fruit-jar, and B the stopper. The former is blown in a single piece, with an opening in

the bottom, and provided with the usual lugs *a a*. It also has the groove C, which slopes obliquely downward on the outside, and therefore receives externally the rubber packing-ring D, which is held on one side by the edge *c*, and on the other by the one *c'*. The cover B is blown in one piece, and provided with a subjacent flange, *b*, that is beveled on the inside, fits over the groove C and fastens tightly down upon the rubber packing. *D' D'* are the two cams on the lower parts of the stopper, having opening spaces *f f*, by which the lugs *a a* are made to ascend above the cams, and gradually draw down the cover upon the packing.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is—

A fruit-jar body and cover A B, respectively, blown in a single piece, with the downwardly-beveled outside groove C, and the inside beveled flange *b*, as and for the purpose described.

Mrs. ELLA G. HALLER.

Witnesses:

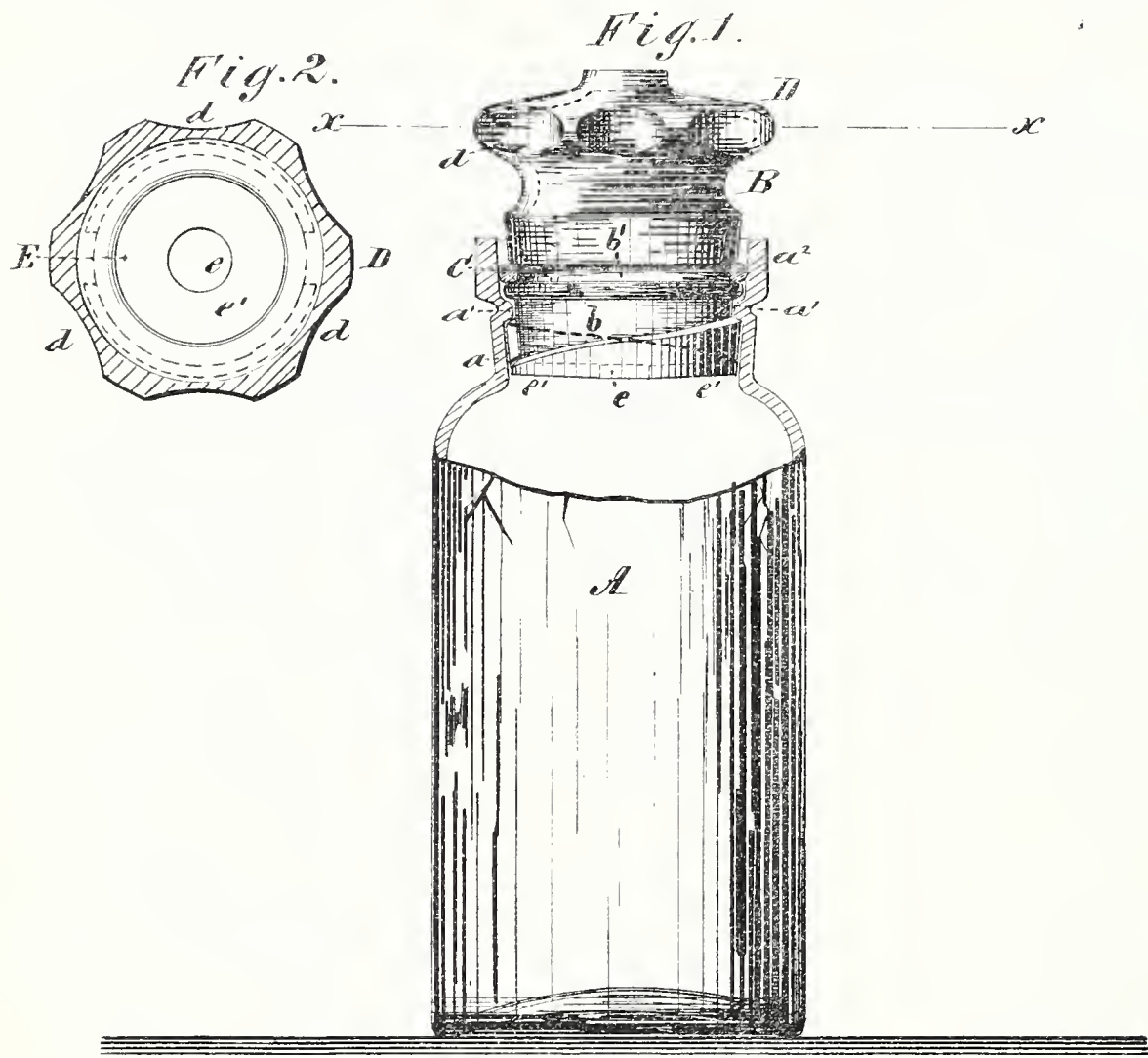
WM. L. HALLER,
MINNIE HALLER.

ELLA G. HALLER.

Fruit-Jars.

No. 136,240.

Patented Feb. 25, 1873.



Witnesses:
G. Mathys
John Klemm

Inventor:
Mrs Ella G. Haller
 PER *Wm. T. C.*
 Attorneys.

UNITED STATES PATENT OFFICE.

ELLA G. HALLER, OF CARLISLE, PENNSYLVANIA.

IMPROVEMENT IN FRUIT-JARS.

Specification forming part of Letters Patent No. **136,240**, dated February 25, 1873.

To all whom it may concern:

Be it known that I, Mrs. ELLA G. HALLER, of Carlisle, in the county of Cumberland and State of Pennsylvania, have invented a new and useful Improvement in Fruit-Jars; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification.

The invention relates to fruit-jars; and consists in a hollow glass stopper having a single central opening at the bottom, and in a jar having blown lugs on the inside and a plain ring on the outside, as hereinafter fully described and pointed out in the claims.

Figure 1 is a vertical and sectional elevation. Fig. 2 is a plan view of stopper. Fig. 3 is a horizontal section of jar.

In the drawing, A represents a fruit-jar provided with blown lugs a^1 a^1 on the inside, and plain ring a^2 thereabove on the outside. I blow the body and lugs first, and then apply plastic glass to form the plain ring a^2 . B is the stopper, having inclined grooves b and annular groove b' on the outside. C is the rubber gasket, which is located in groove b' , and D a cap which surmounts the stopper. This stopper is air-tight, except at the single centrally-placed hole c , which opens out from a

chamber, E, the inside of whose bottom slopes downwardly to this hole.

The fruit is placed in the heated jar while the cover (filled with sirup) is fitted close into the neck. This excludes all air, and as the bulk of sirup and fruit contracts in cooling, the vacuum formed in the jar is filled by the inflow of sirup from the stopper. The gasket, being always below the level of the sirup, is prevented from shrinking so as to admit air, while the top of stopper being solid there is obtained an absolute exclusion of air, and a consequent certainty in the preservation of the fruit for any length of time.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A blown-glass stopper with an inside chamber having a central opening at the bottom only, as and for the purpose set forth.

2. As an article of manufacture, a glass jar having its neck provided on the inside with blown lugs a^1 , and on the outside with a plain ring, a^2 , as and for the purpose set forth.

Mrs. ELLA G. HALLER.

Witnesses:

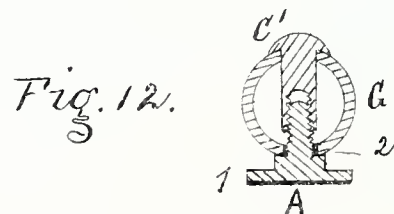
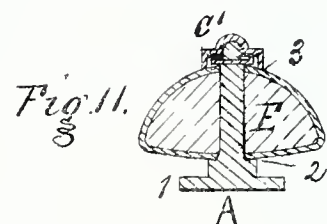
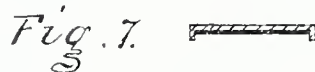
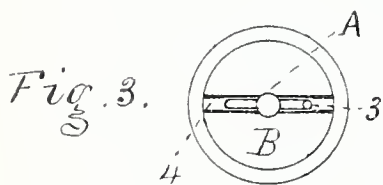
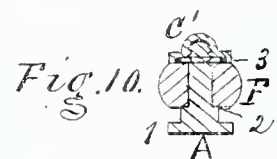
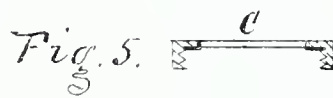
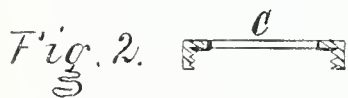
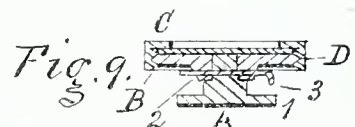
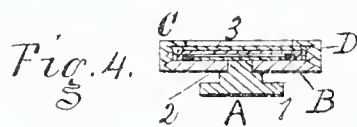
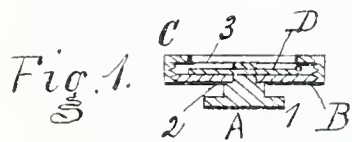
BENJN. EGGLESTON,
W. HEILL.

ANNA CATHARINE WILHELM.

Buttons for Garments.

No. 135,739.

Patented Feb. 11, 1873.



WITNESSES:

Benj Morison
Wm H. Morison.

INVENTOR

Anna Catharine Wilhelm

UNITED STATES PATENT OFFICE.

ANNA CATHARINE WILHELM, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BUTTONS FOR GARMENTS.

Specification forming part of Letters Patent No. **135,739**, dated February 11, 1873.

To all whom it may concern:

Be it known that I, ANNA CATHARINE WILHELM, of the city of Philadelphia, in the State of Pennsylvania, have invented certain Improvements in Buttons for Garments, of which the following is a specification:

My invention relates to a flanged shouldered stem, which forms the shank to be passed through the garment, a detachable pin, and a transverse hole in the end of the stem, in combination with a flat disk and an annular screw-cap, whereby the central or inclosed face of the disk forming the button proper can be readily renewed or changed by a change of a covering fabric of the said disk; the object of this part of my invention being to afford a detachable button applicable to a garment without sewing, the central portion of the face of which can, at any time, be varied by simply substituting one covering for another, as the ornamental style or fashion may, from time to time, require or using render necessary.

My invention also relates to a modification in the construction of the ornamental face of the detachable button, whether the latter be flat, plano-convex, lenticular, oval, or hollow sphere in form, by attaching, in a readily removable or changeable manner, an ornamental central cap to the end of the flanged shouldered stem or shank of the button, so as to clamp the disk, sphere, or other form of the button firmly between the latter and the shoulder of the shank; the object of this part of my invention being the same as that specified in the preceding paragraph.

Figure 1 is a diametrical section of the flanged shouldered stem, cross-pin, flat disk, annular screw-cap, and ornamental fabric adjusted together to form the complete button. Fig. 2 is a diametrical section of the detachable annular screw-cap detached. Fig. 3 is a plan view of the flat disk and annular screw-cap, showing the cross-pin in a groove of the flat disk as passed through the end of the stem. Fig. 4 is a diametrical section of the same button without the groove for the cross-pin. Figs. 5, 6, and 7 are, respectively, diametrical sections of the annular screw-cap, flexible fabric, and a fender-ring to isolate the fabric from the cross-pin. Fig. 8 is a section of the shank, flat disk, and cross-pin above the disk. Fig. 9 is a diametrical section of the same button with the

cross-pin in a tubular projection on the under side of the flat disk. Fig. 10 is a solid oval (in its transverse or diametrical section) bead applied as a button to the shank, and secured by a screw-cap on the end of the said shank. Fig. 11 is a diametrical section of a plano-convex covered button-mold, secured to the shank by a screw-cap, as in Fig. 10. Fig. 12 is a hollow bead or glass sphere, secured to the shank by a tubular screw-cap as a modification of the form of removably securing the button to the shank shown in Figs. 10 and 11.

The shank A has the flange 1 and shoulder 2, as shown in the drawing. The detachable pin 3 is inserted through a corresponding hole made transversely through the upper part of the stem of the shank A. In the flat-disk button, shown by Figs. 1 and 3, the pin is sunk in a groove, 4, made for the purpose in the upper side of the disk B. In Figs. 4 and 8 the pin is shown as in contact with the upper surface of the said disk B; and in Fig. 9 the pin is shown as in a tubular projection on the under side of said disk. In either case the result is the same, *i. e.*, the securing the disk B and the shank A adjustably or detachably together. The annular cap C is screw-cut around in the inner side of its flange, and the perimeter of the disk B is correspondingly screw-cut, so that the former can be readily applied by screwing it over the latter, and thus securing between them a disk of cloth, velvet, silk, or any other ornamental fabric, D, to produce the changeable face of the button whenever a change in the same may be desirable. It is important to have a uniformly-even surface for the fabric D to rest upon, and hence the groove 4 in Figs. 1 and 4 and the tubular projection in Fig. 9 for the reception of the cross-pin 3, both of which constructions leave the upper side of the disk B even; but in dispensing with the groove, as shown in Figs. 4 and 8, the pin 3 has to be covered by a ring or flanged disk, Fig. 7, in order to give the even surface desired for the fabric D. In either mode, however, a uniform even surface is afforded for the fabric D, which can be applied and changed, as wear, fancy, or fashion may suggest, by simply removing and re-applying the ring C with the new fabric between it and the disk B, and thus producing a newly-faced button at any time at a trifling cost.

The modifications of my improved button, shown in Figs. 10, 11, and 12, have the changeable central cap C' made to screw upon the end of the stem of the shank A, which projects upward through the button disk or bead sufficiently for the purpose of receiving the cap C' with the bead or mold, which forms the body of the button, between the said cap C' and the shoulder 2 of the shank A.

It will be seen that a detachable button with a renewable face or ornamental center can be produced by either of the modifications shown and described in the drawing and specifications herein set forth, thus affording change and variety in style without dispensing with the same shank and cap, and consequently at a trifling cost.

I do not desire to claim, broadly, a detachable button, nor, broadly, a shank and button-body detachably secured together, for attaching to and detaching from garments without

sewing or cutting, respectively, as these advantages have been attained before; but what I desire to secure by Letters Patent is confined to the following, viz:

I claim as my invention—

1. The shank A and detachable pin 3, in combination with the disk B, annular screw-cap C, and the changeable fabric D, the said parts being constructed and arranged, in their relation to each other, as and for the purposes hereinbefore set forth and described.

2. The shank A and detachable cap C', in combination with the changeable disk E or either of the beads F G, the said parts being secured together, respectively, substantially as and for the purposes hereinbefore set forth and described.

ANNA CATHARINE WILHELM.

Witnesses:

BENJ. MORISON,

WM. H. MORISON.

E. B. MITCHESON.

Mustache-Spoons.

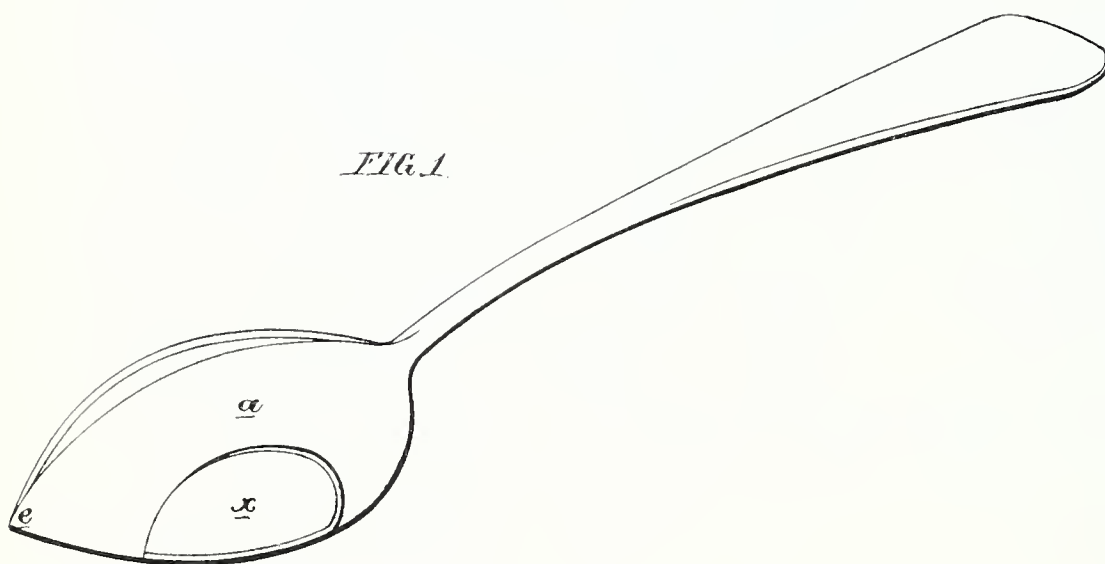
No. 135,141.

Patented Jan. 21, 1873.

FIG 2



FIG 1



Witnesses, *Thomas M. Swan*
Harry Smith

E. B. A. Mitcheson
By her atty
Horner & Son

UNITED STATES PATENT OFFICE.

ELLEN B. A. MITCHESON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MUSTACHE-SPOONS.

Specification forming part of Letters Patent No. 135,141, dated January 21, 1873.

To all whom it may concern:

Be it known that I, ELLEN B. A. MITCHESON, of the city and county of Philadelphia, State of Pennsylvania, have invented a Mustache-Spoon, of which the following is a specification:

The object of my invention is to enable the wearer of a mustache to convey soup and other liquids to his mouth by means of a spoon without danger of soiling or disfiguring his mustache; and this object I attain by combining with the bowl of a spoon a shield, *a*, in the manner shown in the perspective view, Figure 1, the shield being such that, while it permits the user of the spoon to receive into the bowl by the usual dipping process a proper quantity of soup, the latter can be conveyed to the mouth without any portion of the liquid being brought into contact with the mustache.

The shield *a* extends longitudinally from the tip *c* of the bowl to the point where the latter is united to the handle, so as to leave about one-half of the bowl exposed. The shield, however, is so cut away as to leave an opening, *x*, of such dimensions that it can be easi-

ly overlapped and underlapped by the lips, and yet permit the contents of the bowl, when the latter is tilted, to flow freely into the mouth.

An important feature of my invention is the turning up of the outer edge of the shield, so as to prevent any of the liquid from gaining access to the upper surface of the shield on dipping the bowl into the liquid.

The advantage of thus shaping the shield will be rendered obvious by referring to the transverse section, Fig. 2, which illustrates the position of the bowl as it is being dipped into the liquid, the surface of the latter being represented by the line *y*.

I claim as my invention—

The combination, substantially as described, of the shield *a* with the bowl of a spoon, for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ELLEN B. A. MITCHESON.

Witnesses:

ELIZABETH THOMPSON,
E. CARE.

SARAH RUTH.

Sun-Shades for Horses.

No. 134,564.

Patented Jan. 7, 1873.

Fig. 1.

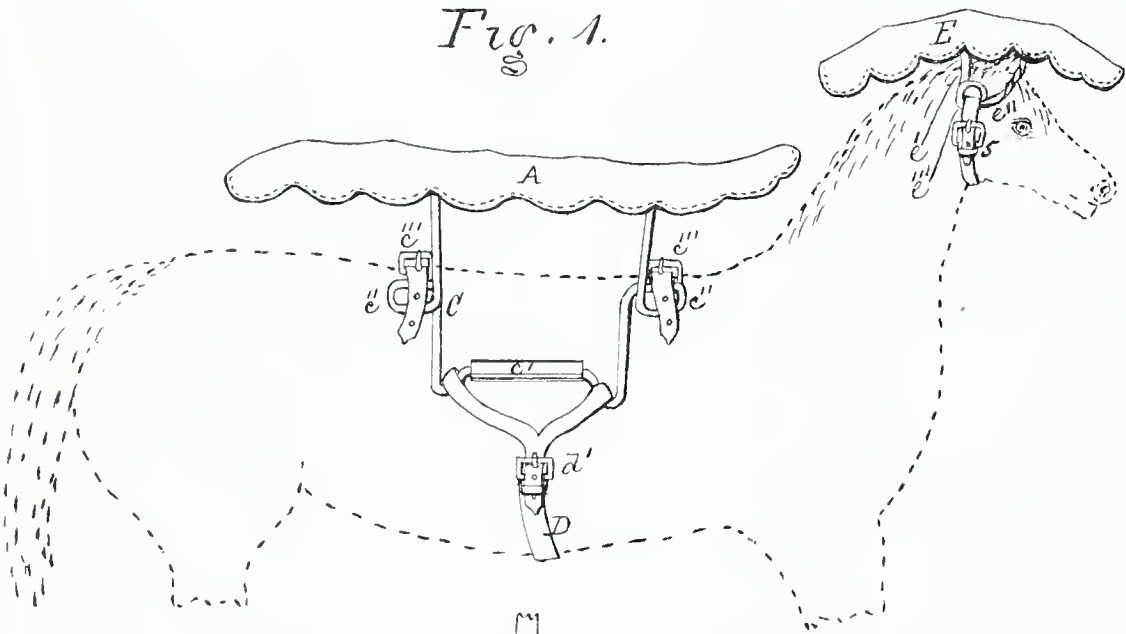
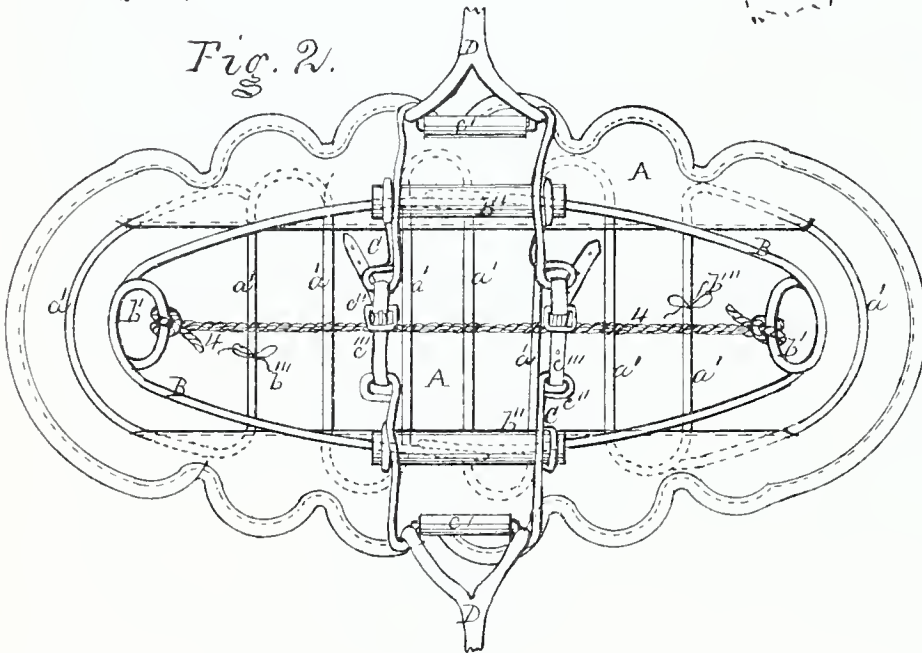


Fig. 2.



WITNESSES:

Benj. Morison.
Wm. H. Morison.

INVENTOR:

Sarah Ruth

UNITED STATES PATENT OFFICE.

SARAH RUTH, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SUN-SHADES FOR HORSES.

Specification forming part of Letters Patent No. 131,561, dated January 7, 1873.

To all whom it may concern:

Be it known that I, SARAH RUTH, of the city of Philadelphia, in the State of Pennsylvania, have invented certain Improvements in Adjustable Sun-Shades for Horses, of which the following is a specification:

My invention relates to the construction of the supporting-frame of the canopy for protecting the animal's back and sides from the direct rays of the sun, and to the devices for securing the same upon the body of the animal; the object of this part of my invention being to greatly lessen the cost of constructing sun-protectors, for which Letters Patent were granted to me, dated August 25, 1868; and also to allow the body-protector to be separate from and operated independently of the head-protector.

Figure 1 is a side view of the improved shade for the body of the animal, and of the shade for the head, both as when applied to the respective parts of the horse, represented by the dotted lines. Fig. 2 is a plan view of the under side of the body-shade.

A is the canopy of the body-shade, and is stiffened by a wire, *a'*, bent in a serpentine manner, and attached to the under side of A by an under lining of canvas. The wired canopy is supported directly upon two pieces of wire, B B, each bent into the form of the longitudinal section of a semi-ellipse, with the addition of a loop, *b'*, at its middle. These two pieces B B of wire have their free ends inserted in two respective hollow cylinders, *b'' b''*, of thin sheet metal, and secured to the canopy A by tie-strings *b''' b'''*; and a cord, 4, keeps them from slipping longitudinally in the tubes, and at any required distance apart to suit the length of the body of the animal, and the whole supported by two upright wires, C C, bent so as to form respective stays for retaining two respective hollow cylinders, *c' c'*, at their mid-lengths, to serve as friction-rollers, and with two loops, *c'' c''*, in the arms of each wire C C, and then the respective two ends of the said wire C secured tightly around the respective two ends of the two hollow cylinders *b'' b''*. The two wires C C are then adjustably connected together by two straps of leather, *c''' c'''*, and buckles attached thereto. These straps rest upon the horse's back, and thus keep the canopy A at a proper distance from the animal. Attached to the lower ends, respectively, of the said two wires C C, are two leather straps, D D, which connect to-

gether by a buckle, *d'*, and serve as a belly-band to secure the shade upon the body of the animal, either in a horizontal position across his back, or at any inclination to either side, as the slanting rays of the sun may render the adjustment of the canopy necessary, the friction-rollers *c' c'* permitting the supporting-wires C C to move freely during the said adjustment, and afterward to prevent any galling or fretting of the skin of the animal.

It will be understood, without any further explanation, that this shade can be readily applied and adjusted upon the body of the horse so as to protect the same from either the vertical or slanting rays of the sun, and that the same protection can be afforded thereby from rain; and, moreover, that the cost of construction, the frame being of common iron wire of sufficient stiffness, will be much less than that of the protector patented to me August 25, 1868, as before referred to.

The head-protecting canopy E, Fig. 1, is stiffened by a wire applied in the same serpentine manner as the wire *a'* in the body-canopy A, and is supported upon the head of the animal by means of a wire bent so as to form a bearing, *e'*, upon the top of the animal's head, and a bearing, *e''*, around the forehead, the bend of the said wire between the two bearings forming an eye or loop, *e'''*, to which are attached, respectively, the two parts of a "throat-latch" and a buckle, 5, for securing the said protector rigidly in place. The wire which forms the two bearings *e' e''* is continued along and around under the canopy E, and the latter secured thereto by tie-strings, thus together producing a more secure and substantial head-protector, and one entirely free from any interference from the body protector.

I claim as my invention—

A canopy for protecting the back and sides of the body of a horse or other animal from the direct and slanting rays of the sun, constructed substantially as described, and supported upon the animal by means of the supporting-wires B B C C, hollow cylinders *b'' b''* and *c' c'*, and the straps *c''' c'''* and D D, arranged and secured substantially as and for the purposes set forth.

SARAH RUTH.

Witnesses:

BENJ. MORISON,
WM. H. MORISON.

SARAH H. BANCROFT & SARAH W. TUCKER.
Bathing-Chairs.

No. 150,510.

Patented May 5, 1874.

fig. 1.

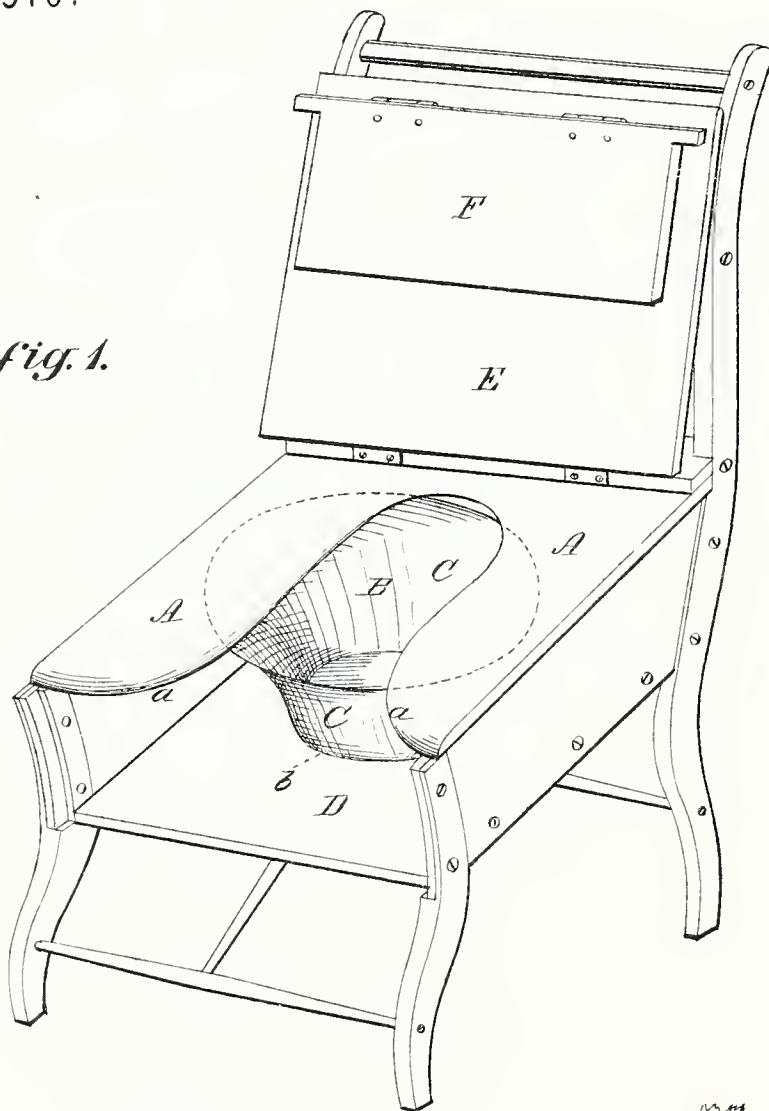
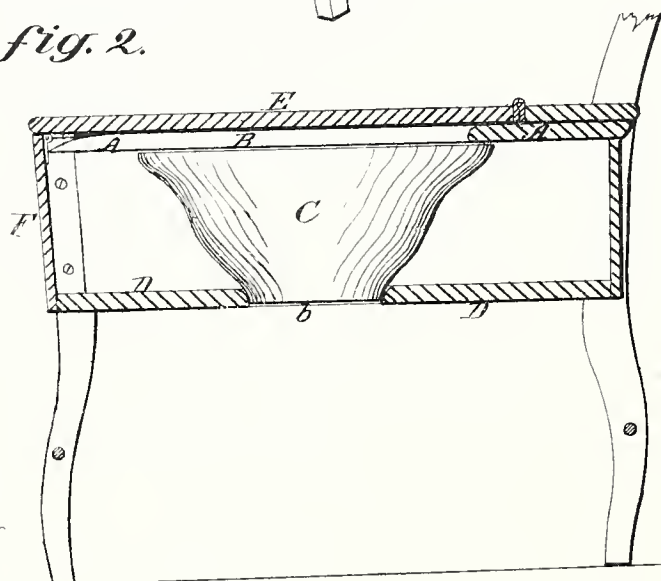


fig. 2.



Witnesses.

Wm. C. Chaffee

Who Assisted

Inventors.

*Sarah H. Bancroft,
Sarah W. Tucker.*

by

*Johnson and Johnson
their Attorneys.*

UNITED STATES PATENT OFFICE.

SARAH H. BANCROFT AND SARAH W. TUCKER, OF MEDIA, PENNSYLVANIA.

IMPROVEMENT IN BATHING-CHAIRS.

Specification forming part of Letters Patent No. **150,510**, dated May 5, 1874; application filed March 27, 1874.

To all whom it may concern:

Be it known that we, SARAH H. BANCROFT and SARAH W. TUCKER, of Media, in the county of Delaware and State of Pennsylvania, have invented a certain new and useful Improvement in Bathing-Chairs, of which the following is a specification:

Our invention consists of a bathing-chair seat having an open front, in combination with a lower support for the basin, and forming an open front space for the entrance and removal thereof, whereby a separate basin can be used, drawn out, and put in place horizontally beneath the open front seat, and avoid a permanent basin with the chair; also, in the combination of a hinged cover having a folding front with a bathing-chair having an open front seat and a lower rest whereon the basin is arranged, and from which it is drawn horizontally, and concealed when in place, by the hinged-cover front, which folds and forms the back when the cover is open.

In the accompanying drawings, Figure 1 represents a view, in perspective, of our improved bathing-chair; and Fig. 2, a vertical section of the same, with the seat down.

The object of our invention is to furnish a chair for those who need to bathe their persons and who are too weak to stoop over a basin without a support, and by its construction of seat allows the person to be supported, and at the same time gives ample room for the action of the hands in bathing the person in a dash sitz-bath.

For this purpose we provide a seat, A, which has an oblong curved opening, B, made to accommodate the person. This opening flares outward at *a a*, and is open at the front to permit the hands to come freely at the person and basin. Beneath this opening B the basin C is supported upon a rest or hole, *b*, in the bottom D, said bottom and seat forming, by their intervening space, the basin-chamber. The sides *a a* of the opening B in the seat lap over the rim of the basin, and the seat itself forms a support for the person in bathing. The seat is provided with a cover, E, having a hinged folding front piece, F, to close over the basin-chamber, and when the seat is un-

covered the front piece F folds flat upon the cover E and forms a back rest, as shown in Fig. 1.

The chair is provided with the ordinary back and legs, and, when covered, has the appearance of the ordinary article of bed-room furniture. It may be easily made to appear as an easy or lounging chair.

Preferably, the chair is constructed of the following dimensions: Height of chair, including cover and casters, seventeen inches; depth of basin-chamber, six inches; width of basin-chamber, sixteen inches; width of finished chair, seventeen and a half inches; cover, three-fourths of an inch thick; ten and a quarter inches for legs and casters; but we do not confine ourselves to any particular proportions.

It will be seen that the lower compartment for the basin is open in front—that is, the space between the seat and the basin-support has no fixed cover for the front side. This is to allow the use of a separate basin for the seat, and to admit of its being put into and taken out of place horizontally, and thereby avoid the use of a fixed basin in the chair-seat with outlet-opening, the separate basin being simply slid in place beneath the curved sides and open front of the seat, and when the cover is closed the open front of the basin-compartment and the basin therein is closed and covered by the hinged front, which stands down in front of the basin-compartment.

We claim—

1. In a bathing-chair, the open front seat A *a a*, in combination with the lower rest D for the removable basin C, to form an open front chamber, and to allow of the separate basin to be slid in and out horizontally, to avoid a permanent basin, as shown and described.

2. The combination of the open front chair-seat A *a a* with the lower support D for the removable basin, the cover E, and the folding front F thereof, as and for the purpose described.

SARAH H. BANCROFT.
SARAH W. TUCKER.

Witnesses:

JAMES F. COULIN,
WM. J. BAILEY.

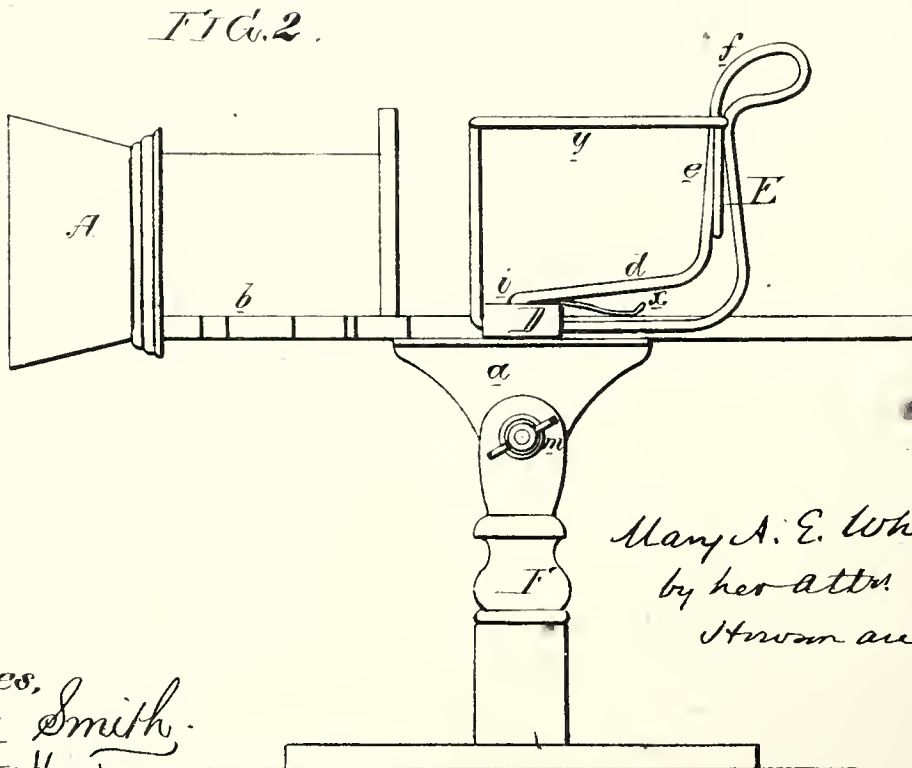
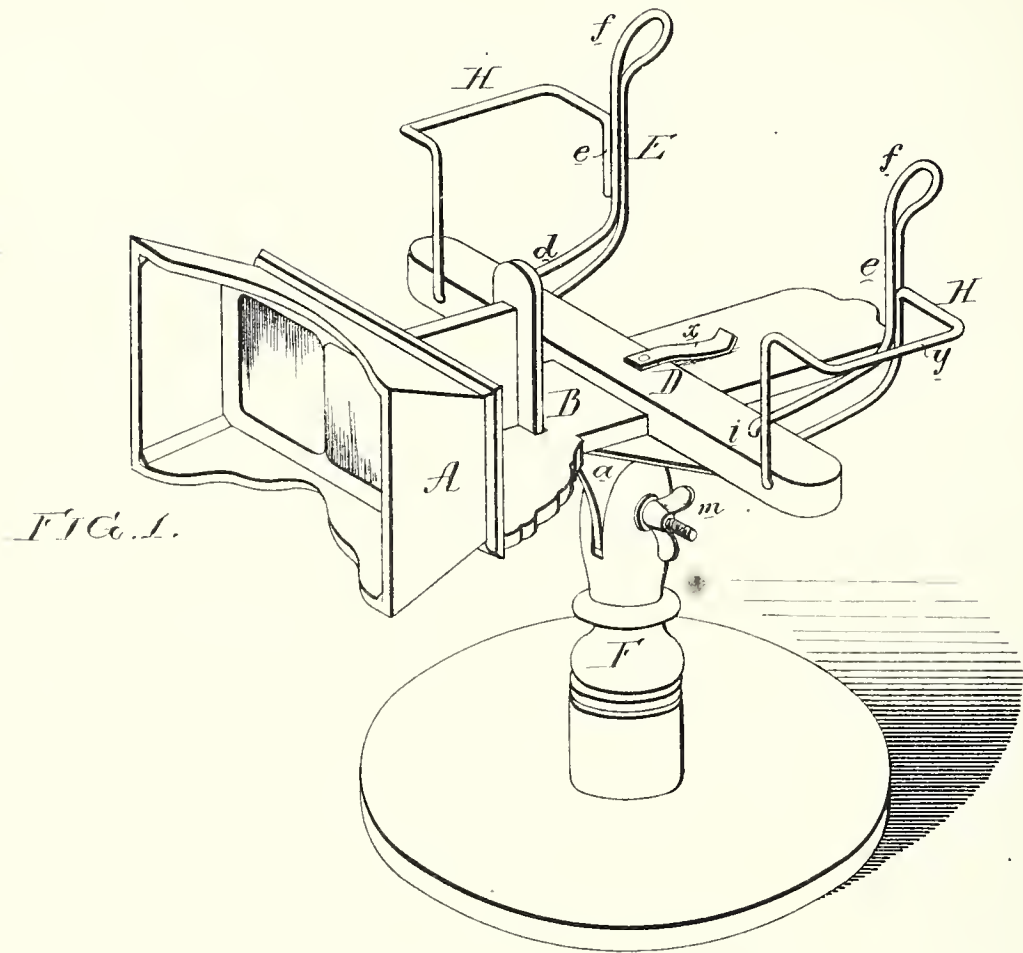


MARY A. E. WHITNER.

Stereoscopes.

No. 158,555.

Patented Jan. 5, 1875.



Mary A. E. Whitner
by her atty.
H. W. A. W. A. W.

Witnesses,
Harry Smith.
Hubert Howson

UNITED STATES PATENT OFFICE.

MARY A. E. WHITNER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN STEREOSCOPES.

Specification forming part of Letters Patent No. **158,555**, dated January 5, 1875; application filed December 9, 1874.

To all whom it may concern:

Be it known that I, Mrs. MARY A. E. WHITNER, of Philadelphia, Pennsylvania, have invented certain Improvements in Stereoscopes, of which the following is a specification:

The main object of my invention is to provide a stereoscopic instrument with a holder, adapted for the reception, retention, removal, and replacing of a series of pictures, in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of the instrument, and Fig. 2 a side view.

A represents a case containing a pair of ordinary stereoscope-lenses mounted on a frame, B, which is arranged to slide in a recess formed in the under side of a transverse bar, D. The frame B is retained in any position to which it may be adjusted by a spring, *x*, on the said bar, which is attached to a plate, *a*, pivoted to a suitable stand, F, in a manner too clearly shown to need an extended description. To the bar D are attached two frames, E, each of which is, in the present instance, formed of a single wire, bent in the manner shown, and has an inclined portion, *d*, on which the edges of the pictures rest, a vertical or slightly-inclined portion, *e*, and a backwardly-curved termination, *f*, for a purpose explained hereafter. To each end of the bar D, or to each frame, or to both bar and frame, is attached a guard, H, consisting, in the present instance, of a single wire, the two guards being somewhat farther apart than a stereoscopic picture is long. The cross-bar D, frames E E, and guards H H constitute the picture-holder, in which a mass of stereoscopic cards are deposited, the front card of the series being permitted, by the terminations *i* of the frames E, to rest with its lower edge on the level surface of the said cross-bar D.

After the front picture has been viewed through the lenses, it may be raised from the holder, and replaced therein at the rear of the series, and this may be continued until the whole of the pictures have been viewed. This reintroduction of a picture into the holder at the back of the series is facilitated by the rounded rears of the frames E, and the forward movement of the series of cards, consequent upon the introduction of a card at the rear of the holder, is facilitated by the inclined portions *d* of the frames.

The front picture of the series is always maintained by the guards H and cross-bar D in a proper position to be viewed through the lenses.

To the under side of the cross-bar D is secured a plate, *a*, which is so hinged to the slotted top of a suitable stand, F, that both the lens-case and picture-holder can be readily adjusted to any desired position, the whole being secured, after adjustment, by the thumb-nut *m*.

The picture-holder and its mass of cards, being supported directly by the stand, insure the steadiness of the instrument.

I claim as my invention—

1. In a stereoscopic instrument, the within-described picture-holder, consisting of the cross-bar D, frames E, and guards H, all combined and constructed substantially as and for the purpose herein set forth.

2. The frames E, inclined at *d*, and rounded at *f*, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

Mrs. MARY A. E. WHITNER.

Witnesses:

HUBERT HOWSON,
HARRY SMITH.

ZILLAH K. YOUNG.
Button-Fastenings.

No. 156,721.

Patented Nov. 10, 1874.

Fig. 1.

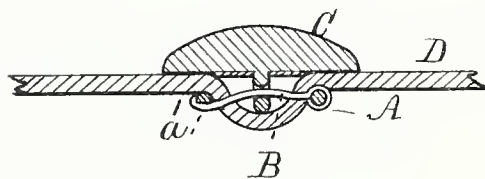
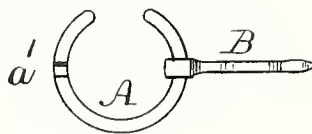


Fig. 2.



Witnesses:

Wm H. Morison
Wm H. Morison

Inventor:

Zillah K. Young

UNITED STATES PATENT OFFICE.

ZILLAH K. YOUNG, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BUTTON-FASTENINGS.

Specification forming part of Letters Patent No. **156,721**, dated November 10, 1874; application filed July 17, 1874.

To all whom it may concern:

Be it known that I, ZILLAH K. YOUNG, of the city of Philadelphia, in the State of Pennsylvania, have invented an Improved Fastening for Detachably Securing Buttons and Similar Articles of Wearing Apparel, of which the following is a specification:

The object of my invention is to produce a detachable fastening for buttons and similar articles (having either a rigid eye-stem or a tuft-shank) that will not require an eyelet-hole or other opening to be made through the fabric of the apparel to which the same is to be attached, and at the same time will be strong and reliable as a fastening, simple and inexpensive of construction, and can be attached and detached with ready facility; and my said invention consists simply of an open metal ring, in combination with a swinging metallic pin or tongue, as will be fully described with reference to the accompanying drawings, in which—

Figure 1 is a vertical central section of a button having an eye-stem or shank of metal attached to a piece of cloth, and of my said fastening for the purpose applied thereto; and Fig. 2, a plan view of my said fastening detached from the fabric.

The open ring A has a slight or shallow groove or depression, *a'*, made directly across near the middle of one half of the ring A, and the pin or tongue B has the end opposite to its point made into a loop or eye, which slips easily and swings freely on the opposite half of said ring, so that when the fastening has been applied, as will be described, the pointed end of said tongue or pin B will rest securely in the indentation or groove *a'* of the ring A, as represented in Fig. 1, while the button will be securely held fast to the fabric of the apparel by the tongue or pin, which has been passed through both the shank of the button and the fabric of the apparel, as represented in said figure. It will, therefore, be seen that either a tuft-shank button or a button having a rigid eye-stem shank can be applied with facility, and that in either case it will not be necessary to make an eyelet-

hole or other opening through the fabric of the apparel in order to attach or detach the button, and this is a matter of great importance, especially in ladies' dresses, in which it is desirable to change the style of buttons, and similar ornamental or useful attachments, in accordance with the changes of taste or fashion, because the apparel will not show any marks or indications of the former location of the said buttons.

The manner of attaching and detaching the button, or other similar useful or ornamental article, whether it be a rigid eye-stem shank or a tuft-shank button, &c., is as follows, viz: The operator, holding the fastening in one hand, and fabric of the apparel in the other, passes the sharp-pointed end of the tongue or pin B through the said fabric from the side thereof which is opposite to the side to which the button is to be applied and secured, then through the eye-stem shank or the tuft-shank of said button, (as either the one or the other sort be used,) then back through the fabric of the apparel, when the operator slips the ring around so as to pass the end which has the indentation or groove *a'* under the pointed end of the tongue or pin B, until the said pointed end drops into said groove or indentation, thus securely holding the button firmly to the outer side of the fabric of the apparel, as represented in Fig. 1.

The object of the groove *a'*, it will be readily seen, is to prevent the ring A from being moved around in wearing the apparel, and also to allow it to be easily separated from the pointed end of the tongue or pin B in detaching the button or other similar article. The extreme point of B may be slightly bent toward the fabric, in order to prevent it from catching into any garment or fabric it may come in contact with, and for the same purpose the ends of the open ring A should be rounded or sloped off. The middle of the tongue or pin B may also be slightly bowed, for the purpose of giving the button-eye a tendency to keep in the middle of the same.

Another point of utility is, that my fastening is a unity, and not liable to be separated

into parts, as is the case with all the detachable button-fastenings with which I have any knowledge.

I am aware that a detachable button-fastening consisting of a double or split ring, in combination with a movable tongue, has been made, and therefore I do not desire to claim said combination; but

I claim as my invention—

A detachable button-fastening, consisting of the single open ring A and swinging tongue B, constructed and connected adjustable together, as and for the purpose set forth.

ZILLAH K. YOUNG.

Witnesses:

BENJ. MORISON,

WM. H. MORISON.

UNITED STATES PATENT OFFICE

SUSETTE ORTH, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN ARTIFICIAL FLOWERS.

Specification forming part of Letters Patent No. **161,350**, dated March 30, 1875; application filed February 8, 1875.

To all whom it may concern:

Be it known that I, Mrs. SUSETTE ORTH, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in the Manufacture of Wax Flowers; and I do hereby declare the following to be a full, clear, and exact description thereof:

My invention relates to the manufacture of wax flowers, and the preparation of the wax therefor; and it consists, first, in forming artificial flowers from tissue-paper or other suitable material, coated with a compound of india-rubber and wax; and, secondly, in imparting the desired tint or shade of color to the sheet or flower by means of the tissue-paper or other material to which the compound is applied.

Wax has been mixed with various ingredients to give body to the sheet; but in all cases the brittleness of the compound has necessitated great care in handling the flowers, and has precluded their use as articles of wear, to meet the demand for which the French flowers, or muslin flowers, are imported at great expense.

The object of the present invention is to produce an article which will take the place of French flowers, having sufficient tenacity to be used as an article of wear, and not brittle, like the ordinary wax flowers, or easily crumpled, like the muslin article.

In preparing the compound I use. I take white wax in any required quantity and india-rubber as commonly found in commerce, preferably in the native state, and render them liquid by heat—generally steam-heat or a water-bath. The relative amount of the rubber to the wax will be, say, one ounce of rubber to the pound of wax. I continue to boil the rubber and wax together for three or four hours, or until such a time as the wax has taken up sufficient rubber to give it the required tenacity, when the surplus or undissolved rubber is removed. The compound is then removed from the fire and is ready to be applied to the fabric, which gives body to the sheet. For this purpose I prefer to use tissue-paper, and, in general, French tissue-paper, which is of finer quality and more evenly colored.

Having removed the compound from the fire, it must be kept liquid while being applied to the sheets of tissue-paper, and this I accomplish by adding a small quantity of

hot water to the wax, which causes the wax to float and preserves its heated fluid condition.

I then select the tissue-paper of the required tints and dip them carefully in the liquid, raising them vertically therefrom, and as the coating commences to chill, or set, it may be thickened by sweeping the paper backward and forward over the surface of the melted compound. Repeated dippings and the temperature of the wax will determine the thickness of the coating. By this means sheets of varying thickness may be obtained, though, for ordinary purposes, the thin-coated sheets are the most useful.

The advantages of my invention are that wax flowers may be formed having sufficient strength and durability to be worn as articles of dress, and sufficiently pliable to permit of their being restored when crumpled or disarranged. The sheets of wax can be worked more readily in forming flowers and similar articles and from the thinness of the sheets which can be used, the article formed will have a more natural appearance. Finally, the trouble and expense of coloring are avoided, as the color of the tissue-paper employed as a base or foundation for the wax compound will determine the color of the sheet produced.

The tissue-paper may be dipped in wax alone and produce an excellent effect, but is not so tough and pliable an article as when rubber is added to the compound, which will prevent the peeling of the wax, and counteract its brittleness in working.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, artificial flowers made of tissue-paper or other suitable material, and coated with a compound of india-rubber and wax, substantially as described, and for the purpose specified.

2. Sheets of tissue-paper or other suitable material, coated with a compound of india-rubber and wax, and tinted in various colors previous to the application of such compound, substantially as and for the purpose set forth.

In testimony whereof I, the said SUSETTE ORTH, have hereunto set my hand.

SUSETTE ORTH.

Witnesses:

F. W. RITTER, Jr.,
T. B. KERR.

ANN MALIN.
Frying-Pan.

No. 166,120.

Patented July 27, 1875.

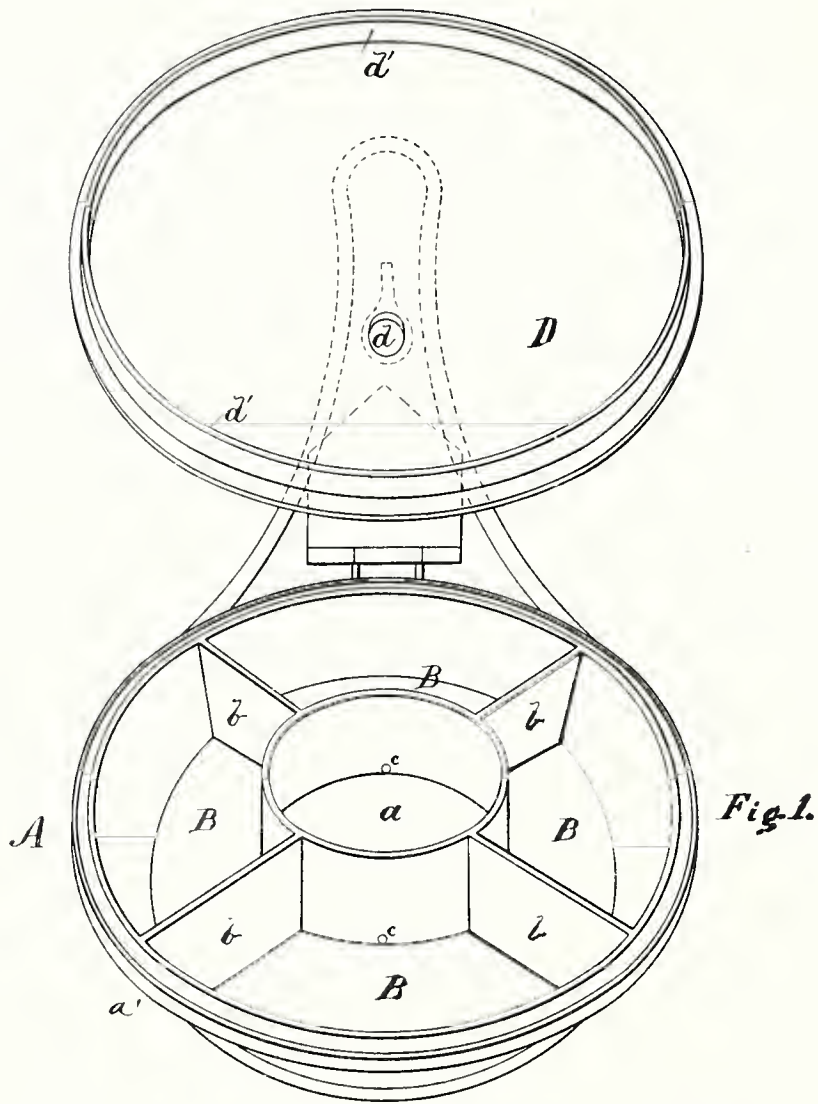
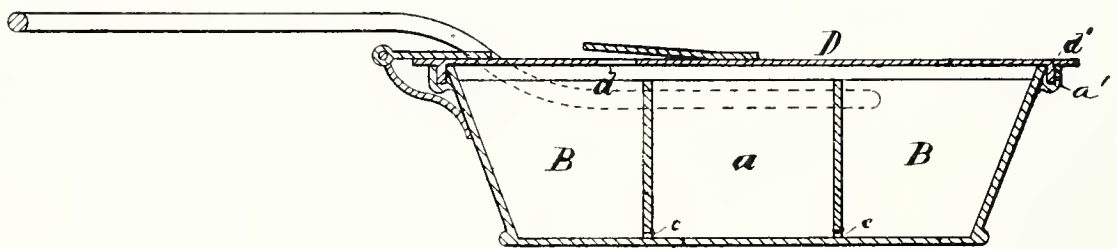


Fig. 2.



Witnesses

S. J. Van Stavern. By
J. P. Connolly

Inventor

Ann Malin
Connolly Bros. Attorneys

UNITED STATES PATENT OFFICE.

ANN MALIN, OF DARBY, PENNSYLVANIA.

IMPROVEMENT IN FRYING-PANS.

Specification forming part of Letters Patent No. **166,120**, dated July 27, 1875; application filed June 12, 1875.

To all whom it may concern:

Be it known that I, ANN MALIN, of Darby, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Frying-Pans; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective of the invention. Fig. 2 is a vertical longitudinal section.

The object of my invention is to provide a frying-pan in which several different articles may, without being brought in contact with each other, be fried at the same time. A further object of my invention is to provide means for gradually and automatically supplying grease in an economical manner to the various articles being fried. A still further object of my invention is to make the frying process more rapid than heretofore.

My invention consists of a frying-pan having a central fountain for containing grease, and divided into various compartments by radial partitions, into which the articles to be fried are placed, said fountain and compartments communicating by suitable openings in the wall of the former.

Referring to the accompanying drawing, A shows a frying-pan, formed with a central well or fountain, *a*, from which proceed radial partitions *b b*, &c., dividing the pan into several compartments, B B, &c., which communicate with the well *a* by means of apertures, *c c*, &c. D represents a hinged lid, having a safety-valve, *d*, to permit the escape of steam, and a peripheral flange, *d'*, which fits in a groove, *a'*, around the upper edge of the pan A, forming a steam-tight joint.

The well or fountain is to be supplied with grease or other lubricant, and the various articles to be fried placed separately in different compartments, B B. The hinged lid is now tightly closed and the pan placed over the fire. The grease, as fast as required, will slowly pass through the apertures *c c* from the fountain *a* into the compartments B B. The closed lid will serve to lessen the escape of heat, thus causing the articles to fry more quickly than when uncovered, while the valve *d* will avert danger by permitting the escape of steam.

The upper edge of the partitions B B should be a trifle below the edge of the pan, so as to permit the escape of steam from the remote compartments through the valve *d*.

In some cases, as those skilled in the art of frying will best understand, it may be desirable, after having put grease in the fountain, and before placing the articles to be fried in their respective compartments, to hold the pan over the fire for a few moments, so as to grease the bottom.

What I claim as my invention is—

1. As a new article of manufacture, a frying-pan divided into compartments, and having a grease-fountain communicating laterally with said compartments, substantially as set forth.

2. In combination with a frying-pan, A, a grease well or fountain, *a*, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of June, 1875.

ANN MALIN.

Witnesses:

GEO. C. SHELMEKDINE,
M. DANL. CONNOLLY.

UNITED STATES PATENT OFFICE.

SARAH SLATER, OF PHILADELPHIA, PA., ASSIGNOR TO HERSELF, HENRY W. GRAY, AND MOSES SMILEY, OF SAME PLACE.

IMPROVEMENT IN COMPOUNDS FOR WELDING, HARDENING, AND TEMPERING STEEL.

Specification forming part of Letters Patent No. **165,378**, dated July 6, 1875; application filed April 28, 1875.

To all whom it may concern :

Be it known that I, SARAH SLATER, widow, of Philadelphia, Pennsylvania, have invented a certain Compound to be used in Welding, Hardening, and Tempering Steel and Wrought-Iron, of which the following is a specification :

The invention relates to that class of compounds used for welding, hardening, and tempering steel and wrought-iron ; and it consists in a composition formed by mixing the following ingredients in about the proportions given : Wrought-iron filings, one ounce ; borax, one and a half pound ; muriate of ammonia, one-half pound ; cyanide of potassium, one quarter pound ; prussiate of potash, eleven ounces ; corrosive sublimate, one pound ; alcohol, one gill. When thoroughly mixed and dried it is reduced or pulverized. For welding, the compound is used dry. For hardening and tempering, it is mixed with water and used in a fluid state.

I am aware that Letters Patents No. 38,554, dated May 19, 1863, were granted to A. Briggs ;

No. 145,445, dated September 16, 1873, and No. 142,939, dated December 9, 1873, were granted to J. Popping ; and No. 147,576, dated February 17, 1874, were granted to H. Schierloh, for the same purpose ; but my invention tempers finer, restores ruined iron and steel, and is entirely reliable for jumping or butt-welding.

I claim as my invention--

A compound for welding, hardening, and tempering steel and iron, consisting of a mixture of wrought-iron filings, borax, muriate of ammonia, cyanide of potassium, prussiate of potash, corrosive sublimate, and alcohol, in the proportions as set forth.

In testimony whereof I hereunto sign my name, in presence of two subscribing witnesses.

SARAH SLATER.

Witnesses :

FRANCIS D. PASTORIUS,
H. W. GRAY.

EMMA B. CARVER.

Convertible Lunch Basket and Table.

No. 165,305.

Patented July 6, 1875.

Fig 4

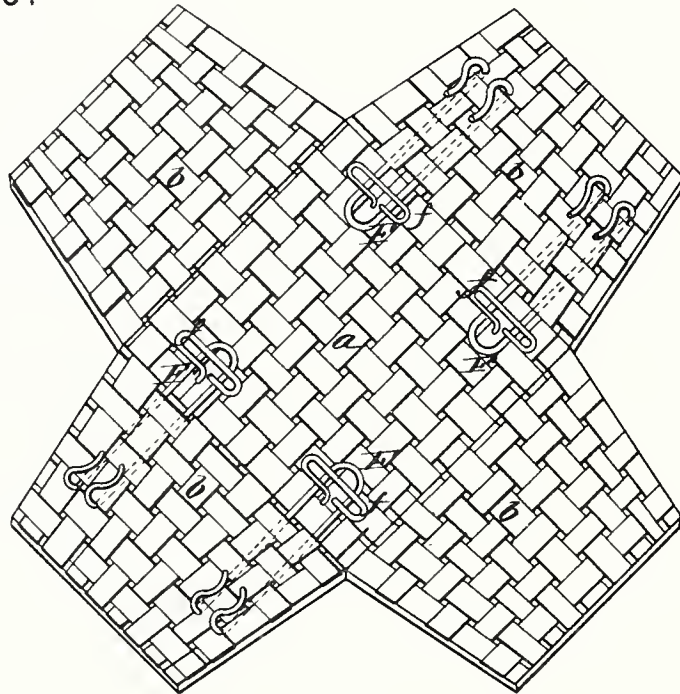
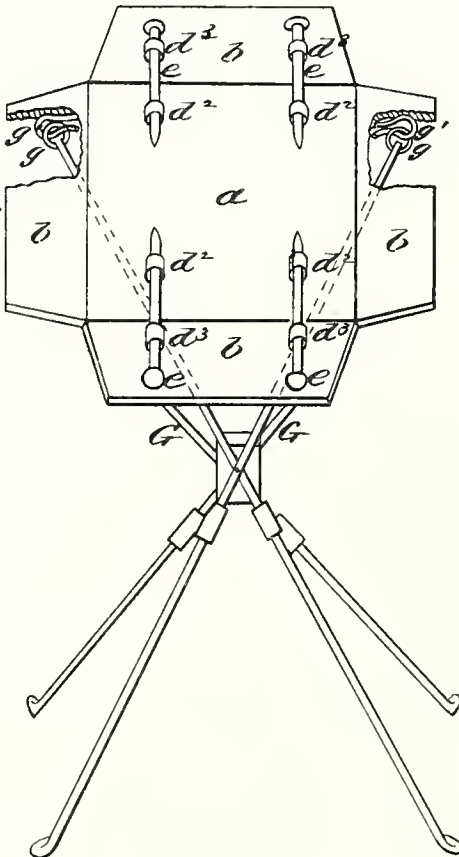


Fig 5



Witnesses

S. J. Van Doren.
Jos. B. Connolly

By

Emma B. Carver
Counselor for

Inventor

Attorneys

EMMA B. CARVER.

Convertible Lunch Basket and Table.

No. 165,305.

Patented July 6, 1875.

Fig. 1

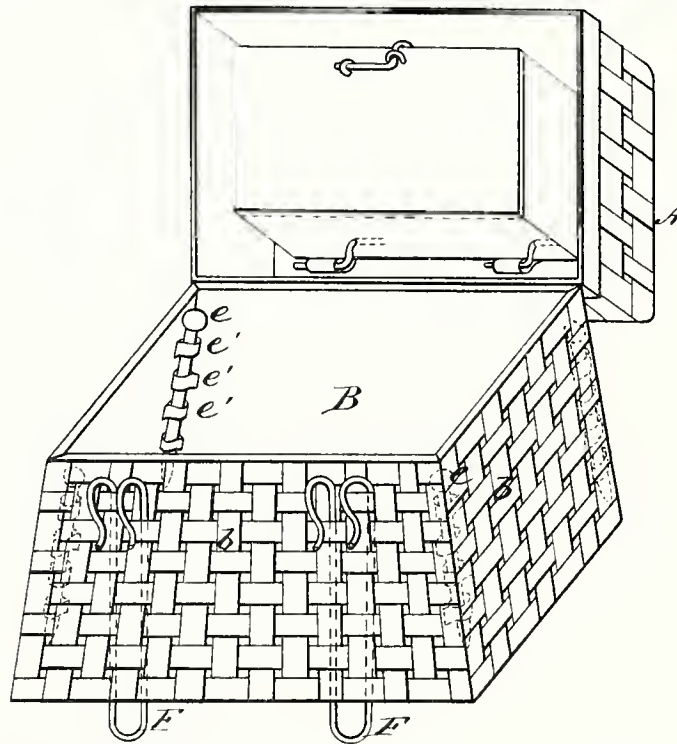


Fig. 3

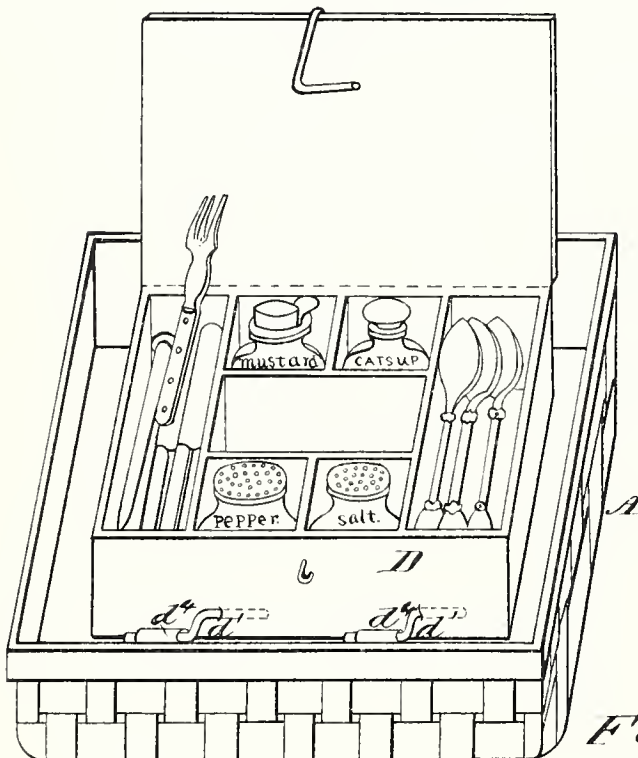
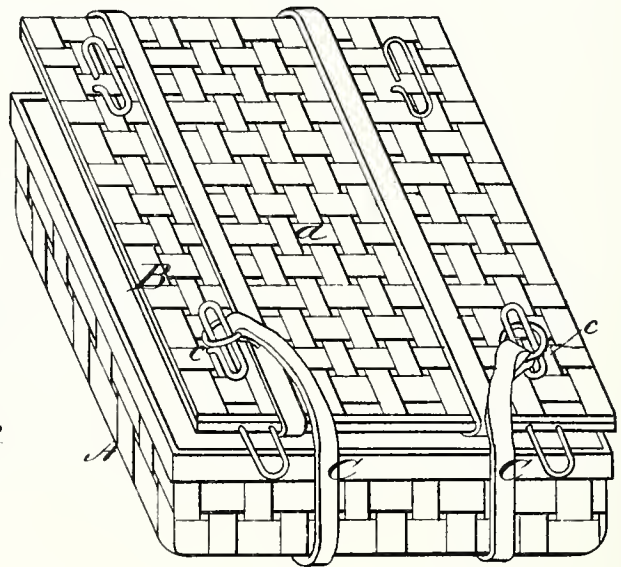


Fig. 2

Witnesses

S. J. Van Stavern. By
J. P. Connolly

Inventor

Emma B. Carver
Connolly & Co.
Attorneys

UNITED STATES PATENT OFFICE.

EMMA B. CARVER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CONVERTIBLE LUNCH BASKETS AND TABLES.

Specification forming part of Letters Patent No. **165,305**, dated July 6, 1875; application filed April 23, 1875.

To all whom it may concern:

Be it known that I, EMMA B. CARVER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Convertible Lunch Basket and Table; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective view of lunch-box arranged for use. Fig. 2 is a perspective view, showing cover and contents. Fig. 3 is a perspective view of parts folded. Fig. 4 is an under-side view of table top. Fig. 5 is a perspective view of table.

The object of this invention is to provide a neat and compact contrivance for the convenience of travelers, tourists, and others. Said invention accordingly consists in the novel construction and combination of devices adapted to fold and fit closely together in the form of a conveniently portable package, and comprising the constituent elements of a lunch-basket, lunch-table, and service-box, all as hereinafter more fully described.

Referring to the accompanying drawings illustrating my invention, A designates a tray made of wicker-work or other suitable material, of rectangular form, and adapted for the ordinary purposes of a lunch-tray, as well as to constitute a lid to the lunch-basket. B designates a device to be used interchangeably as a lunch-basket and table top. The device B consists of the center mat *a* and hinged folding sections *b b*. The latter are utilized to form the sides of the lunch-box, as shown in Fig. 1, or to form leaves for a table, as shown in Fig. 5. When serving the former purpose the edges of the sections *b* are united by pins *e* passing through loops *e' e'*. These pins are also used to support two of the leaves in a horizontal position when the device B is used as a table top, the pins then being passed through loops *d² d³*. The other two leaves are similarly supported

by sliding loops F, fastened across the joints by means of pivoted buttons or equivalent means *f*.

G G are the table-legs, which intersect and are pivoted together so that they may be folded. These legs hold rings *g* on their upper ends, which are attachable to the bent ends *g'* of the loops F.

D designates the service-box designed to contain spices, condiments, &c., and occupying the center of the tray A, to which it is fastened by means of sliding pins *d¹* entering the loops *d⁴*. This box is detachable, and, besides being used as a service-receptacle, may be used as a holder for sewing conveniences, the tray being useful as a work-basket.

C C are straps, which serve as handles, and to hold the tray A and device B together, and with the contents of the tray form a compact package suitable for transportation. The tray A, it will be seen, serves a double purpose—as a means of carrying dishes and other articles when the box is removed, and with or without the box as a lid for the lunch-basket, with which appliance the latter must or should be provided.

Having described my invention, I claim as new and desire to secure by Letters Patent—

1. The lunch-basket body B, constructed of the sections *a b*, hinged together and provided with devices to lock it in position, either when folded as a lunch basket or box or extended as a table top, substantially as specified.

2. The tray A, having the loops *d⁴*, in combination with the box D, having the sliding pins *d¹*, substantially as shown and described.

3. The detachable case D, in combination with the tray A, substantially as and for the purpose specified.

4. The combination of the mat *a*, sections *b*, loops *e'*, and pins *e*, forming the basket B, as shown.

5. The sliding loops F and buttons *f*, in combination with the mat *a* and sections *b*, constituting a table top, substantially as described.

6. The pins *e* and loops *d² d³*, in combina-

tion with the mat *a* and sections *b*, constituting a table top, and provided with means for the attachment of legs, substantially as described and shown.

7. The folding legs *G*, in combination with the folding table top, consisting of the mat *a* and hinged sections *b b*, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of April, 1875.

EMMA B. CARVER.

Witnesses:

CHARLES CARVER,
J. HENRY CARVER.

ELIZABETH W. STILES. 2 Sheets--Sheet 1.
Reading and Writing Desk.

No. 167,586.

Patented Sept. 7, 1875.

Fig. 1.

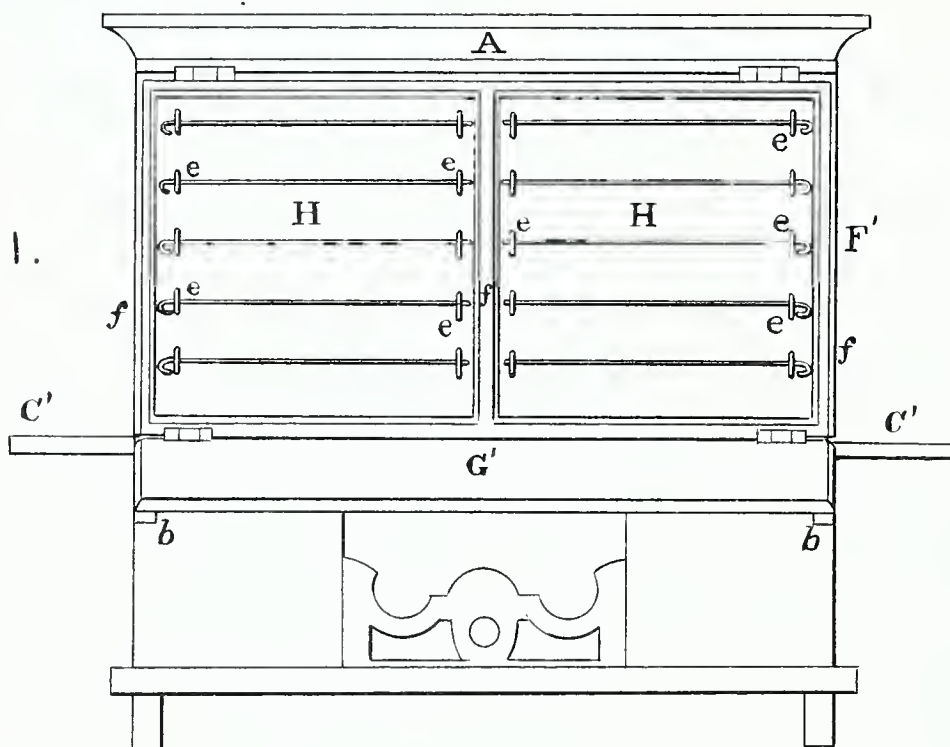
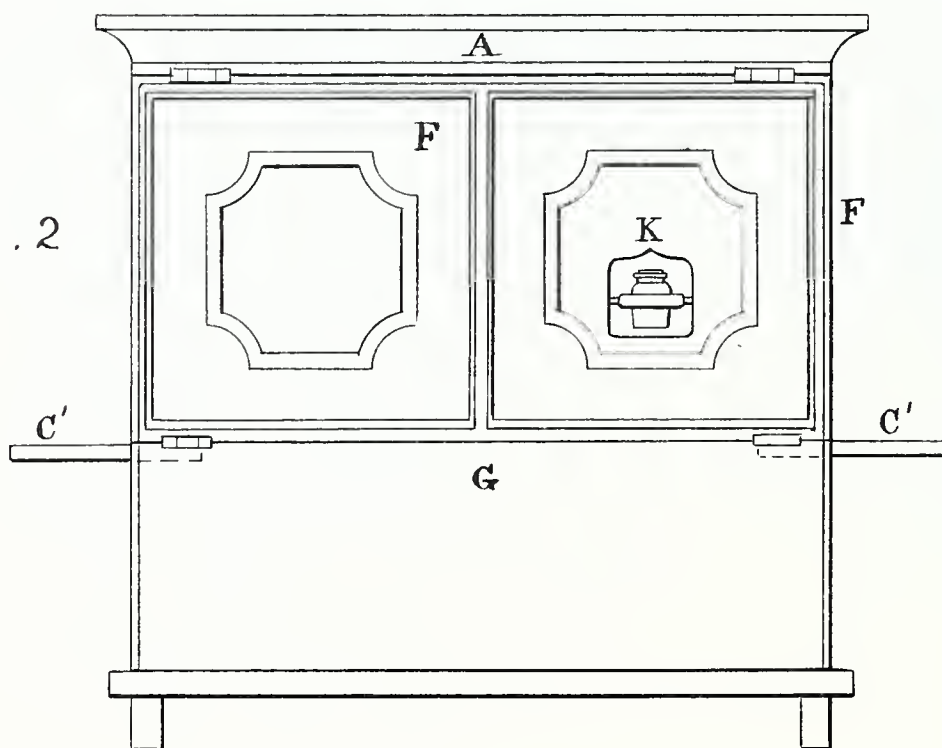


Fig. 2



Witnesses :
A. P. Lacey
G. B. Towles.

Inventor :
Elizabeth W. Stiles
By *W. Burris Atty.*

ELIZABETH W. STILES.
Reading and Writing Desk.

No. 167,586.

Patented Sept. 7, 1875.

Fig. 3.

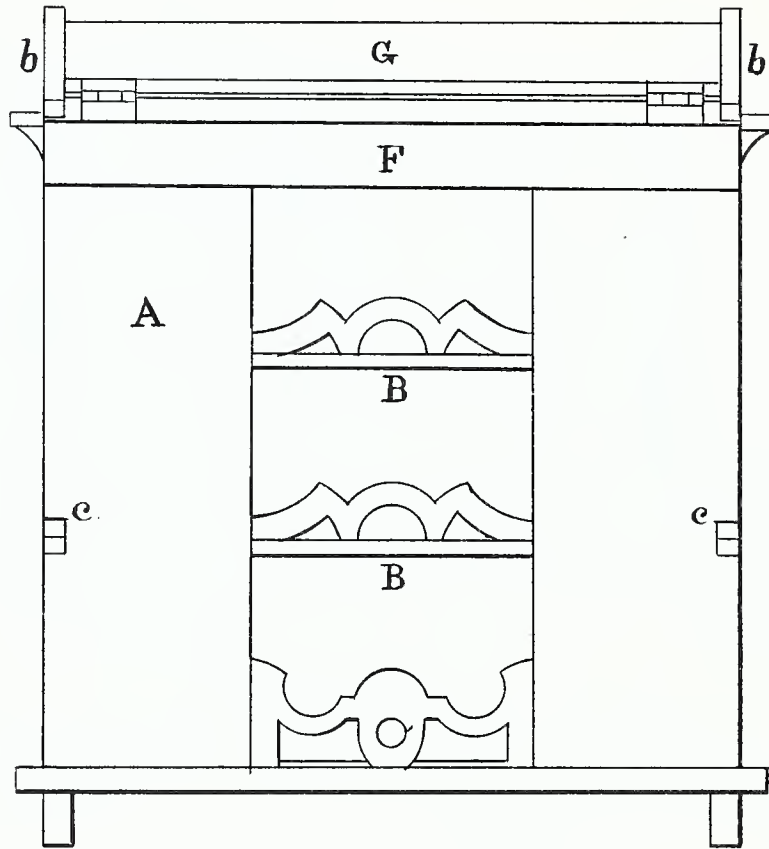


Fig. 4.

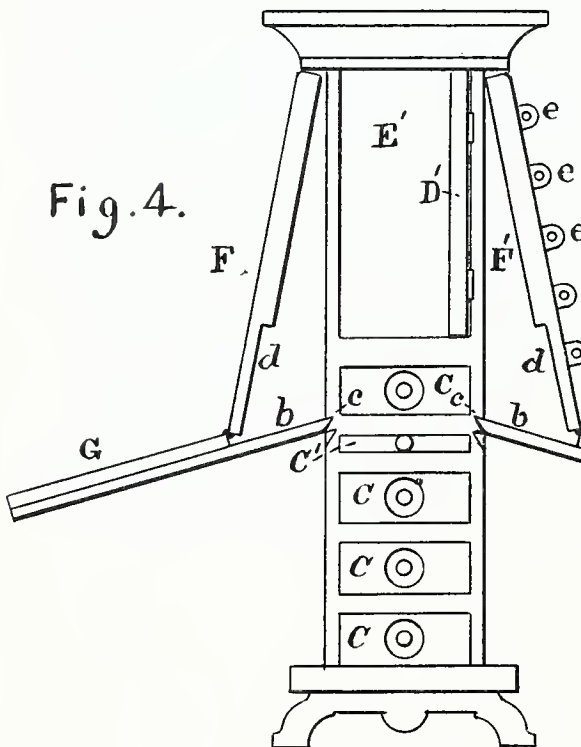
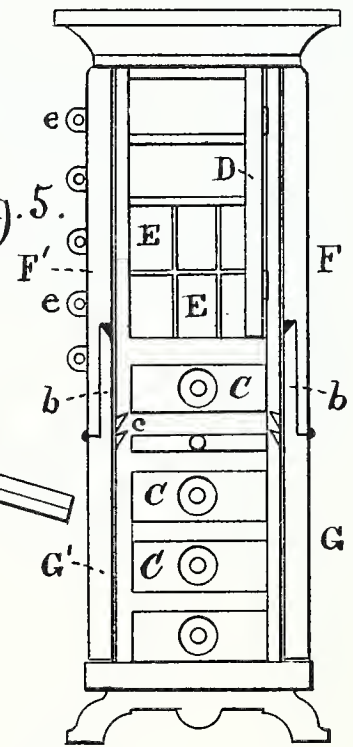


Fig. 5.



Witnesses:
A. P. Lacey
G. B. Lacey

Inventor:
Elizabeth W. Stiles
By *W. Burris Atty.*

UNITED STATES PATENT OFFICE.

ELIZABETH W. STILES, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN READING AND WRITING DESKS.

Specification forming part of Letters Patent No. **167,586**, dated September 7, 1875; application filed March 24, 1875.

To all whom it may concern:

Be it known that I, ELIZABETH W. STILES, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Combination of Paper-Racks and Reading and Writing Desks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a side elevation, showing the paper-rack and reading or writing, folding and sliding tables in position. Fig. 2 is a reverse side elevation, showing the swinging door and folding table closed. Fig. 3 is a view of the same side as Fig. 2, showing the swinging door and folding table turned up. Fig. 4 is an end view, showing the folding tables and end door opened; and Fig. 5 is a reverse end view, showing the end door opened and folding tables closed.

The object of my invention is to provide a combined book and magazine case, writing and reading desk, and paper-rack, constructed to be readily folded up and set aside when not in use, and especially adapted for reading-rooms, libraries, hotels, steamboats, &c.; and the invention consists of a case provided with shelves for books and magazines, drawers in the middle for writing materials, pigeon-holes, apartments for record-books, and sliding tables in the ends, and swinging doors and reading and writing folding tables in the sides, as hereinafter fully described.

In the drawings, A represents a case, the middle of which is provided with shelves B for books, magazines, old files of papers, or waste paper. The ends of the case are provided with drawers C for writing materials, sliding tables C' for writing or reading tables, and doors D D' inclosing pigeon-holes E for letters and files of papers, and space E' for record-books or magazines. F F' represent swinging doors, hinged at the top, and G G' represent folding shelves or tables, hinged to the bottom of the doors, and provided with arms b, forming braces to the tables, constructed and arranged to catch in notches or

ratchets c on the case, for holding the tables in position for reading or writing upon them. The edges of the doors F F' are provided with recesses d to receive the braces when the tables are folded up, as shown in the drawings. H H represent paper-racks on the front of door F', which racks are attached by means of metallic holders e, fastened inside of the columns f of the door, to receive and hold the rods h, forming the paper-files. The paper-files may be constructed and attached in any other convenient manner.

At K, in the panel of door F, an inkstand may be attached, arranged on pivots to keep it in proper position when the door is opened or closed.

The sliding tables C' may be provided with grooves for pencils and pens, and with small inkstands set in the tables.

The desk will be provided with casters, on which it may be readily rolled to any required position convenient for use, and moved back out of the way when not in use.

In reading-rooms and other suitable places both of the folding tables are opened, and both of the sliding tables may be drawn out, as shown in the drawings, so that both sides and both ends of the case may be used at the same time; and when the tables are folded and slid in place, as shown in Fig. 5 of the drawings, the whole case, desks, and paper-racks occupy very little room, and may be set aside out of the way.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of paper-racks H with a case, A, and reading and writing folding tables G or G', substantially as and for the purposes described.

2. The book and magazine case A, having swinging doors F F', hinged at the top to the cabinet, and folding tables G G', hinged to the lower part of the said doors, and supported, when open for use, by braces b on the doors, and notches or ratchets c on the case, substantially as described and shown.

3. The combined book and magazine case, reading and writing tables, and paper-racks, constructed as described, consisting of a case, A, provided with notches or ratchets c, and having shelves B in the middle, drawers C,

sliding tables C', doors D D', pigeon-holes and space E E' in the ends, swinging doors F F', provide l with recesses d, folding tables G G', provided with braces b, and paper files or racks H on the sides, substantially as and for the purposes described.

In testimony that I claim the foregoing as

my own invention I affix my signature in presence of two witnesses.

ELIZABETH W. STILES.

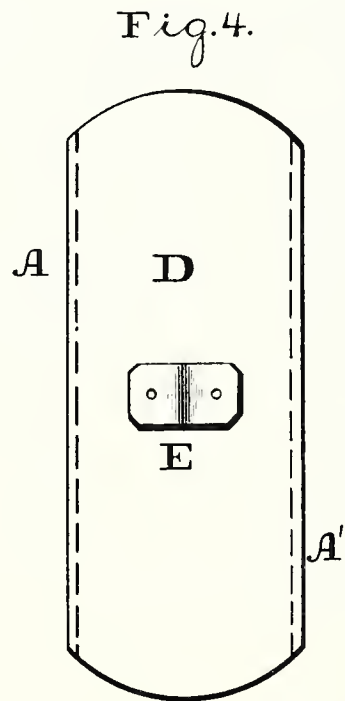
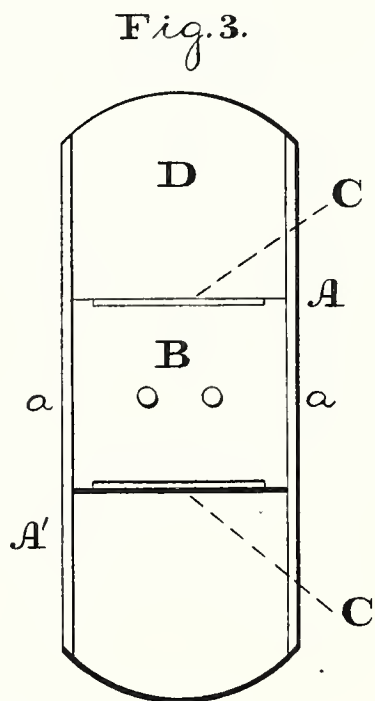
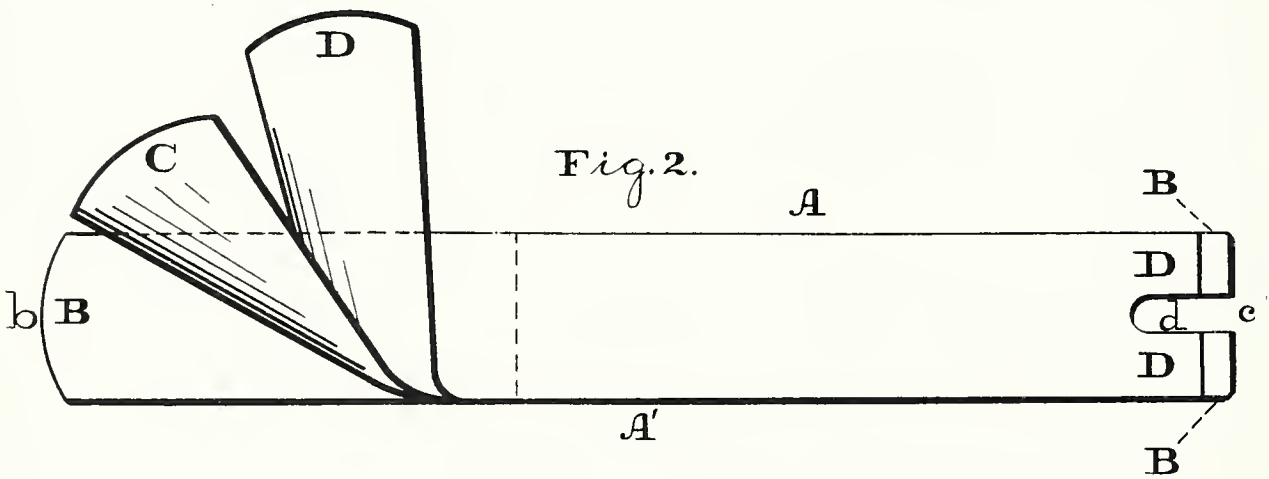
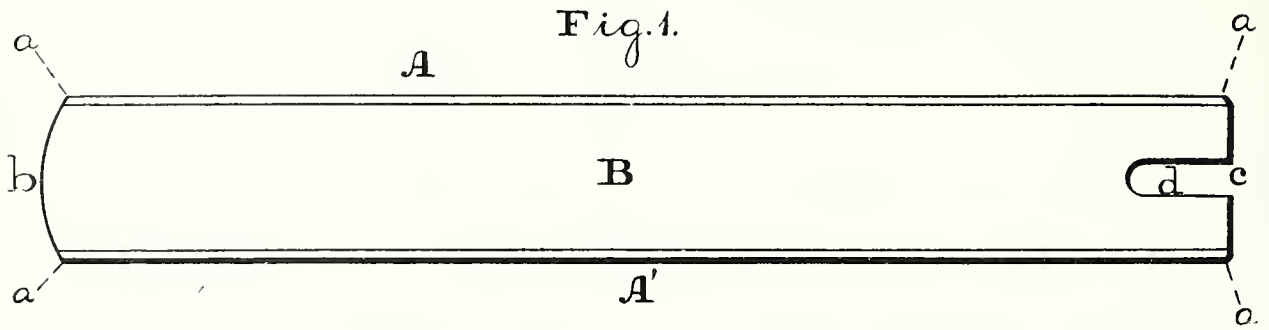
Witnesses:

A. J. KYNETT,
SAML. M. STILES.

ELIZABETH J. FRENCH.
Electro-Therapeutic Appliance.

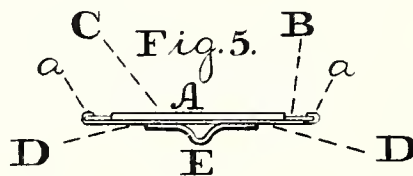
No. 167,162.

Patented Aug. 31, 1875.



Witnesses:

L. T. Brown,
At. P. Grant.



Inventor:

Elizabeth J. French.
by *John A. Diederheim*
att.

UNITED STATES PATENT OFFICE.

ELIZABETH J. FRENCH, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN ELECTRO-THERAPEUTIC APPLIANCES.

Specification forming part of Letters Patent No. **167,162**, dated August 31, 1875; application filed July 9, 1875.

To all whom it may concern:

Be it known that I, ELIZABETH J. FRENCH, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Electro-Magnetic Appliances for the Human Body; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figures 1 and 3 are face views of the device embodying my invention. Figs. 2 and 4 are views of opposite sides thereof. Fig. 5 is an end view of Figs. 3 and 4.

Similar letters of reference indicate corresponding parts in the several figures.

The object of my invention is to furnish a device which may be used for application to the body alone as a galvanic element, and as an electrode for the conveyance of currents from a separate source of electricity to any desired part of the body; and to this end it consists in those features more particularly hereinafter described and claimed.

Referring to the drawings, A represents a device embodying one form of my invention, which is constructed of three strips, B C D, of metal, respectively, zinc, copper, and brass. These strips are arranged face to face, parallel to each other, and form a compound strip, A'.

The strip of copper is between the strips of zinc and brass, which are thus on the outside, and in order to hold together the several strips the sides of the strip of brass in the longitudinal direction thereof are formed with laps or folds *a*, which are brought over the strip of zinc, thus connecting the two strips, and confining the strip of copper between them. The strip C of copper will be gaged in length so as to be properly proportioned relatively to the lengths of the other strips, B D.

In Fig. 2 the dotted line indicates the length of the strip of copper, which occupies

a position at one end, *b*, of the two other strips.

The three strips, being thus in contact at one end of the compound or triple strip A', generate, through the medium of moisture and perspiration of the human body, a static current of electricity, which is passed off at the other end *c* of the compound strip, said end *c* being formed into the shape of a horse-shoe-magnet by cutting a channel or way, *d*, in the length of the strips, and having the strip of brass somewhat shorter than the strip of zinc, so that the end of the latter is uncovered, as shown in Fig. 2.

The current of electricity that is generated is continuous, and, though silent, takes specific and controllable action, which is to be directed or applied to parts of the human body where disease is located, and to serve as a remedial agent therefor.

In Figs. 3 and 4 the strips of copper and zinc are placed at the middle of the strip of brass, and the two ends of the compound strip form magnets.

To the back of the outer strip of brass I secure an eye, F, which is adapted to receive the end of a wire from a battery.

In this case the compound strip is to be properly located at the diseased part of the body, and the battery then applied, so that the power of the latter will be intensified and rightly directed to the desired spot.

I am aware that elements composed of two metals have been made for application to the body; but I am not aware that three metals or alloys of metal have before been used for this purpose, and in any manner similar to my device.

As I have discovered that these may be so used, and with great advantage and utility, and have invented devices for carrying the same into effect, and having described the same, what I claim as new, and desire to secure by Letters Patent, is—

1. The galvanic element consisting of the triple strip A', formed of strips of zinc, copper, and brass, substantially as and for the purpose set forth.

2. The triple strip A', consisting of strips of zinc, copper, and brass, combined at one end, and formed into the shape of a horse-shoe-magnet at the other end, substantially as and for the purpose set forth.

3. The triple strip A', in combination with the eye E, substantially as and for the purpose set forth.

4. The triple strip A', consisting of strips

of zinc, copper, and brass, one of the strips being formed with the laps or folds *a*, holding or securing together all the strips, substantially as and for the purpose set forth.

ELIZABETH J. FRENCH.

Witnesses :

JOHN A. WIEDERSHEIM,
A. P. GRANT.

LYDIA H. SHEPPARD.

PICTURE-EXHIBITOR.

No. 171,585.

Patented Dec. 28, 1875.

FIG. 1.

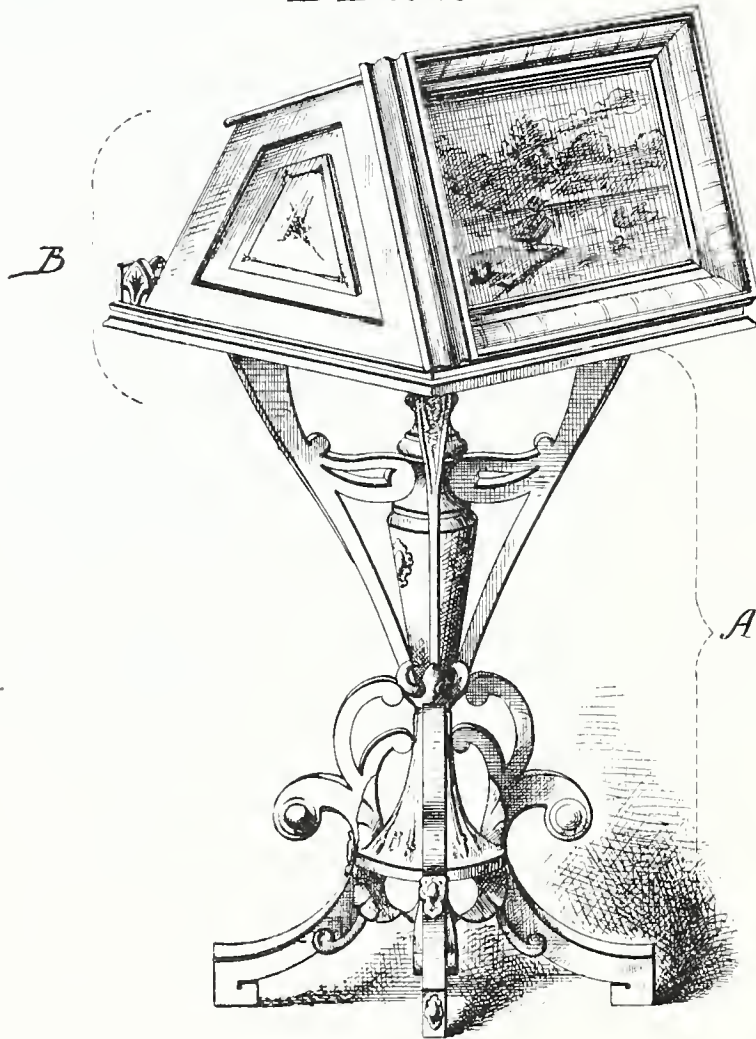
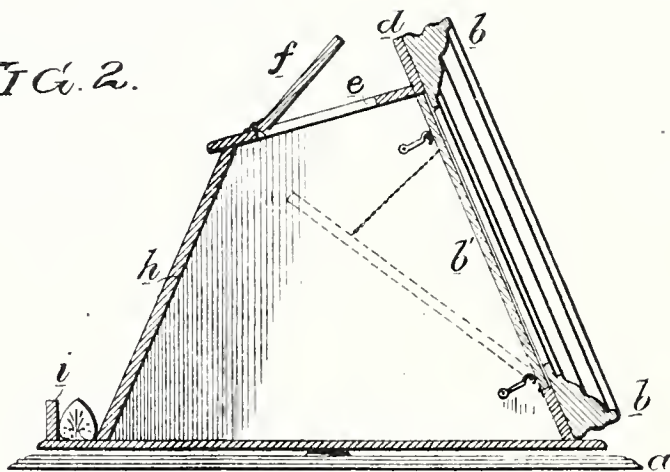


FIG. 2.



Witnesses, } John Deemer,
Harry Smith

Lydia H. Sheppard
By her Attorneys
Horton and Son

UNITED STATES PATENT OFFICE.

LYDIA H. SHEPPARD, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PICTURE-EXHIBITORS.

Specification forming part of Letters Patent No. **171,585**, dated December 28, 1875; application filed November 13, 1875.

To all whom it may concern:

Be it known that I, LYDIA H. SHEPPARD, of Philadelphia, Pennsylvania, have invented an Improved Picture Case and Stand, of which the following is a specification:

The object of my invention is to construct an attractive stand for the display of pictures to good advantage, and for containing a supply of pictures, any one of which may be readily adjusted for exhibition, the case admitting of being turned laterally to any position which will present the picture to the best light. This object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of the case, and Fig. 2 a vertical section of the same.

A is the support, which may be constructed in different ways, and ornamented in any style which the taste of the designer or manufacturer may suggest. B is the case, which is secured to the top *a* of the support by a central pin or bolt, so that it can be turned laterally to any position which the character of the picture and the direction of the light may suggest as the most appropriate. To the inclined front *d* of the case is secured a picture-frame, *b*, which is maintained in position by hooks or other suitable retaining or releasing devices, and this frame is provided with a hinged back, *b'*, which, when closed, retains the picture in position, but when allowed to fall back, as shown by dotted lines in Fig. 2, permits the picture to be removed.

In the top of the case there is an opening, *e*, through which the hand and arm can be introduced when a picture has to be removed from or adjusted to the rear of the frame, and to this opening *e* may be adapted a suitable door, *f*.

I prefer to make the rear of the case B inclined, as shown in Fig. 2, so that it will present a rest, against which may be placed engravings, photographs, or other like pictures for exhibition, the lower ends of the said pictures being retained in place by a rib, *i*, on the bottom of the case.

There may be an opening in either or in both sides of the case instead of, or in addition to, that on the top, if desired.

I claim as my invention—

1. The combination of the case or receptacle B, arranged to turn on a support, A, with an exhibiting picture-frame, *b*, attached to said case, substantially as described.

2. The combination of the case or receptacle B, having a hinged door, *f*, with the exhibiting picture-frame *b* and its hinged back *b'*, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LYDIA H. SHEPPARD.

Witnesses:

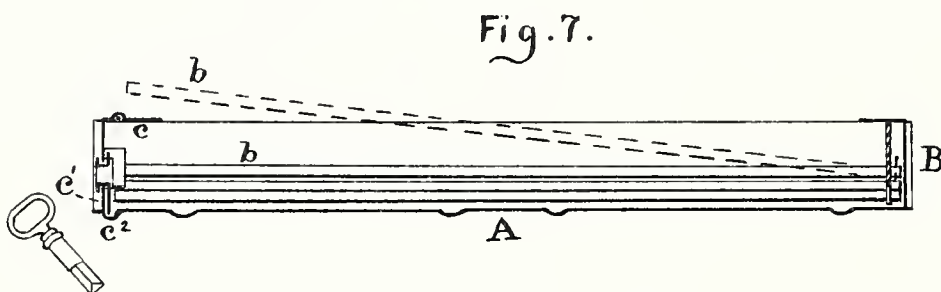
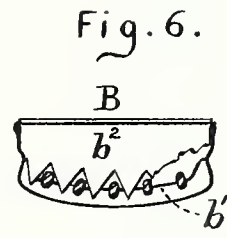
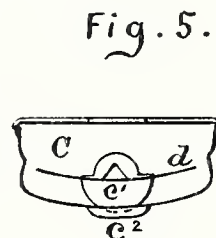
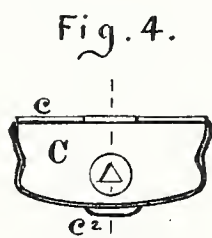
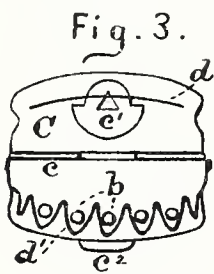
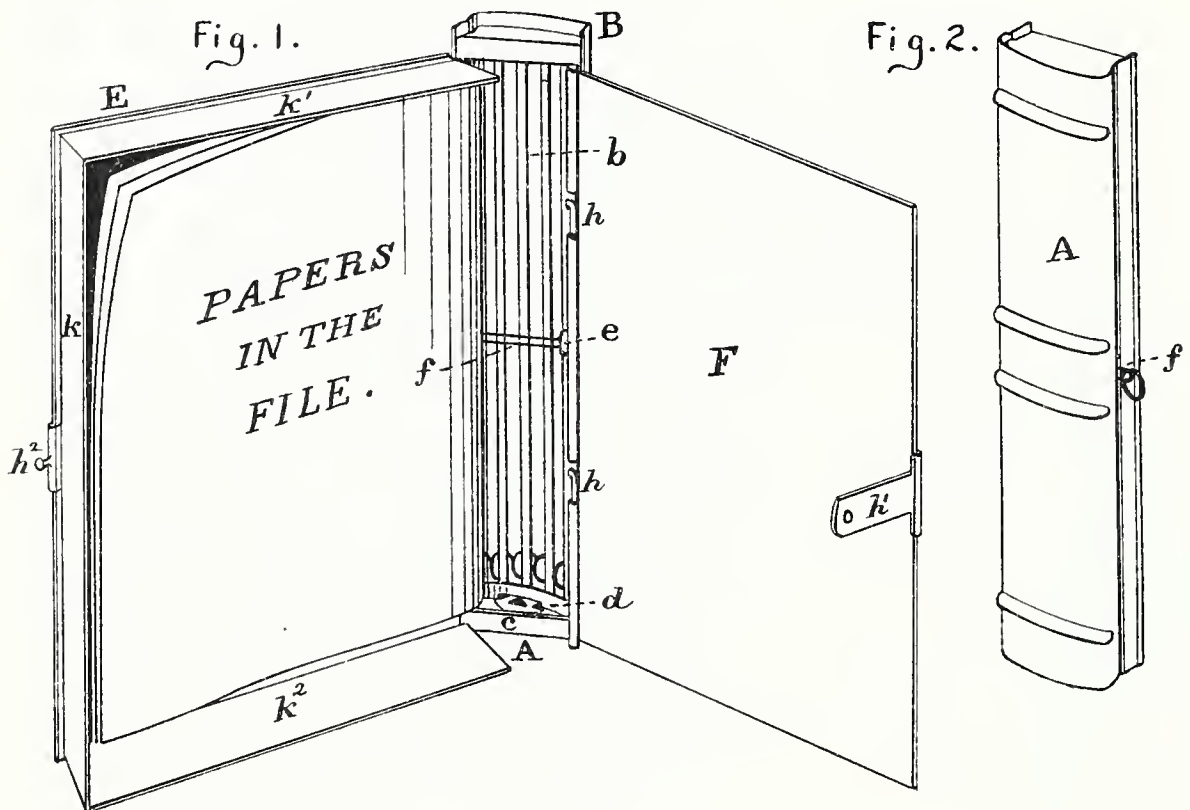
ELWOOD T. DEETZ,
HARRY SMITH.

ELIZABETH W. STILES.

TEMPORARY BINDER FOR PAPER FILES.

No. 178,975.

Patented June 20, 1876.



Witnesses :

H. Anthon ..
J. S. Kellogg

Inventor :

Elizabeth W. Stiles
By W. Purvis
Atty.

UNITED STATES PATENT OFFICE.

ELIZABETH W. STILES, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN TEMPORARY BINDERS FOR PAPER-FILES.

Specification forming part of Letters Patent No. **178,975**, dated June 20, 1876; application filed October 28, 1875.

To all whom it may concern:

Be it known that I, ELIZABETH W. STILES, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Temporary Binders; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which drawings—

Figure 1 is a perspective view with lids attached. Fig. 2 is a perspective view of the back of the file without the lids. Fig. 3 is an end view, showing the hinged end turned up. Fig. 4 is an end view with the end closed. Figs. 5 and 6 are inside views of the two ends. Fig. 7 is a longitudinal section of the case with the file-rods.

My invention relates to temporary binders for paper-files; and consists of a case of metal or other suitable material, made in the form of the back of a book, provided with rods on the inside of the case to hold the papers, which rods are hinged or pivoted at one end, and held in place at the other end by a hinged and adjustable holder.

The file is provided with removable lids, to entirely inclose the papers in the form of a book, or the lids may be removed and the file used without them, as hereinafter more fully described.

A is the metallic case, made in the form of the back of a book, and *b* represents the file-rods, hinged or pivoted at the end B by a wire, *b*¹, passing through holes in the ends of the rods, and fastened to the sides of the case. The hinged ends of the rods are inclosed by a plate, *b*², having notches to receive and allow the rods to be raised at the other end to adjust thereon the papers, as shown in Figs. 6 and 7 of the drawings. C represents the other end of the case, hinged to a cross-brace, *c*, and provided with a circular bolt, *c*¹, eccentrically pivoted in the end C in position to be turned by a key into the recess *c*² in the back of the case A.

On the inside of the hinged end C is a curved flange, *d*, extending, when the end is

closed, over the ends of the rods to hold them in place.

A coiled wire, *d'*, is arranged in and across the case A, near the end C, to hold the rods *b* in place laterally, and to prevent them from falling out of their position when the locking-flange *d* is removed. Spring-holders, such as are used for pen-holders and pencils, may be employed to hold the rods laterally, instead of the coiled wire.

In long files middle stay-wires *f* may be inserted in the side of the case, and passed through the edges of the papers into a holder, *e*, formed on the inside of the case A.

E F represent the lids, attached to the case by slip-hinges *h*, so that the lids may be attached or removed, as desired.

The lid E is made with end and edge plates *k k*¹ *k*², and the lid F is provided with a hinged clasp, *h*¹, to fasten over the button *h*² on the edge of lid E, so that when the lids are closed the file presents the appearance of a closed and clasped book, and the papers are protected from exposure to dust or injury, and the case may be placed like a book on a shelf in a book-case; and when it is desired to use an open file the lids are unhinged and removed, leaving a file with the book-shaped back, as shown in Fig. 2, which may be placed on a shelf in a book-case with the back outward, presenting the appearance of the back of a book.

To insert papers upon the file the hinged end C is unlocked and turned up, as shown in Fig. 3, and that end of the rod is raised, as shown by dotted lines in Fig. 7.

The file may be made with any required number of file-rods *b*, and the papers, being placed in the order of their dates or numbers from left to right on the rods, will always be in their proper position, like the leaves of a book, in relation to their dates and pages.

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the rods *b*, pivoted or hinged at one end, in a paper-file case, A, the adjustable end C, constructed to hold in place the other ends of the rods, substantially as described.

2. In combination with a paper-file case, A, the removable lids E F, attached to the case

by means of slip-hinges, substantially as described.

3. In combination with the case A, having a recess, c^2 , and rods b , pivoted in the case at the end B, the hinged end C, having flange d and locking-bolt c^1 , substantially as and for the purposes described.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

Mrs. ELIZABETH W. STILES.

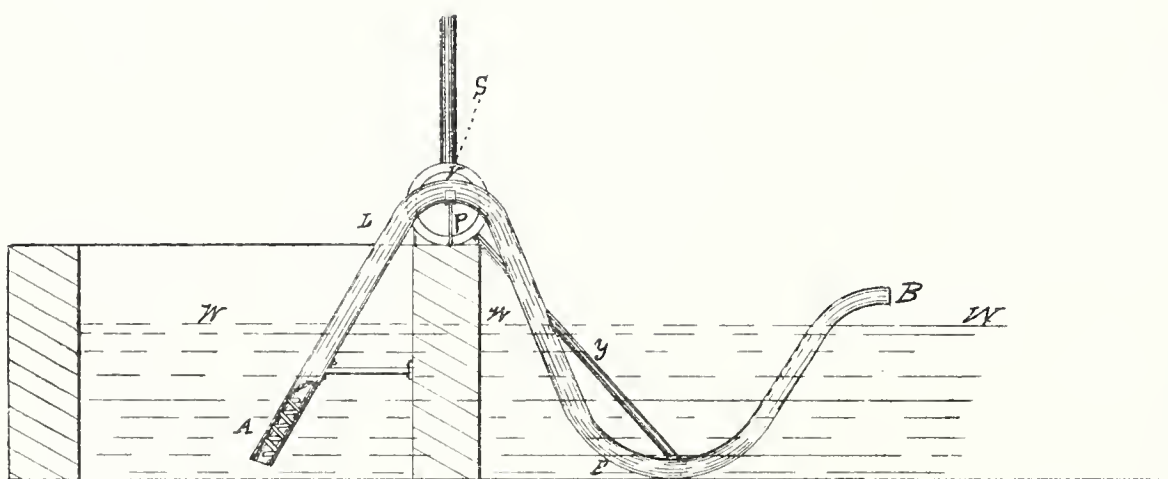
Witnesses:

JOHN G. FLAMMER, Jr.,
FERRIE HENSHAW.

EMILY E. TASSEY.
SIPHON PROPELLER-PUMP.

No. 184,996.

Patented Dec. 5, 1876.



WITNESSES.

A. C. Johnston
James Black.

INVENTOR

Emily Evans Tasse

UNITED STATES PATENT OFFICE

EMILY E. TASSEY, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN SIPHON PROPELLER-PUMPS.

Specification forming part of Letters Patent No. **184,996**, dated December 5, 1876; application filed May 27, 1876.

To all whom it may concern :

Be it known that I, EMILY EVANS TASSEY, of the city of Pittsburg, county of Allegheny, State of Pennsylvania, have invented a new Siphon Propeller-Pump; and I do hereby declare the following drawings and engravings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention without further invention or experiment.

The nature of my invention is to provide means of discharging large portions of water—as from a coffer-dam—into the river; and consists of a bent tube, in the end of which, in the bottom of the coffer-dam, is a screw-propeller or other mechanical device for raising water, and utilizes the atmospheric pressure in sustaining the water in that portion of the tube air-tight above the water-line, thus holding the water *in equilibrio* in the two equal arms of the bent tube. In order to accomplish this purpose, I employ a bent tube containing a screw-propeller, moved by steam or other power, and a jet of compressed air, introduced near the base of the discharging-arm.

Referring to the drawings to more fully illustrate and describe my invention, Figure 1 is a side elevation.

Similar letters indicate in each of the figures like parts.

S represents the steam-engine or other power employed to rotate the screw-propeller by means of the crank P. A is the screw-propeller. W is the water-line. B is the mouth of the tube, a few inches above the water-line. V is that portion of the tube above the water-line, in which, after the air is displaced, the water is sustained by atmospheric pressure. T is a small tube, reaching from the engine to the base of the discharging-arm of the siphon, introducing a jet of compressed air, which forces the water upward in the discharging-arm, both by mechanical pressure and by its natural expansion and ascension; also, according to the law of transmitted pressure, as shown in hydraulic machines, the force of the pressure of the air is multiplied by the number of times the area of the small air-tube is contained in the area of the water-tube. Let the area of the air-tube be one inch, and its force five pounds, and the area of the water-

tube ten inches; the five pounds of air is multiplied by ten, equalling fifty pounds of pressure. Again, let the height of the water from E to B be ten feet, its weight is five pounds per inch, or fifty pounds for the ten inches, equalling the five pounds of air-pressure multiplied by ten inches in area.

Power being applied to the screw, its motion raises the water, displacing the air in that portion of the tube, air-tight, above the water-line. Then is the water from A to E *in equilibrio*. Above the water-line it is sustained by atmospheric pressure to any height less than thirty feet.

The progress of the water in the tube is that of a wave, and it is produced by the same causes that produce the wave, viz., unequal pressure on a body of water. There are, first, the pressure of the screw; second, the jet of air; third, the suction at V; fourth, the gravitation of the water from V to E.

The velocity of the flow in a siphon is in proportion to the height of the source above that of the discharge, and conversely. The greater velocity represents the higher source. At the start, when the coffer-dam is full, the curved tube above the water-line being full, it is easy to give the water a velocity equal to the production of a new virtual water-level at the point L, ten feet above the water-line. If the velocity is sixteen and one-twelfth feet per second vertically, the water from V to E will fall freely by gravitation, and, falling, it leaves a vacuum, to which the water coming from A must rush. There is here an equilibrium of motion and of force. As the water descends in the coffer-dam, the velocity diminishes, or, in other words, the virtual water-level descends, but at a slower rate, because there is the preponderance of the water *in equilibrio* in motion with its acquired velocity. Let the water be ten feet deep in the coffer-dam when full, the power of the screw and air-jet, with the accumulated force of the water in motion, will, when it is nearly empty, raise that low water ten feet, or to the descending virtual level. With the last foot of water carried up the tube, the air rushes up to fill the vacuum at V, and the water falls from V to the water-level outside; also, when a strong current of water is convenient, the end of the discharge

pipe or tube may be placed in that current, thus aiding the discharge by the suction of the current; also, the discharge-tube may terminate at E, a point of nearly the same level as the bed of the coffer-dam, and on the end of the tube, at or near E, there shall be placed a valve, opening outward, to prevent the return of the water to the coffer-dam.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In combination with the curved tube, arranged as described, the propeller-pump in the receiving end, and the air-supply pipe in the discharging end of the tube, as and for the purpose described.

In witness whereof I have hereunto set my hand.

EMILY E. TASSEY.

Witnesses:

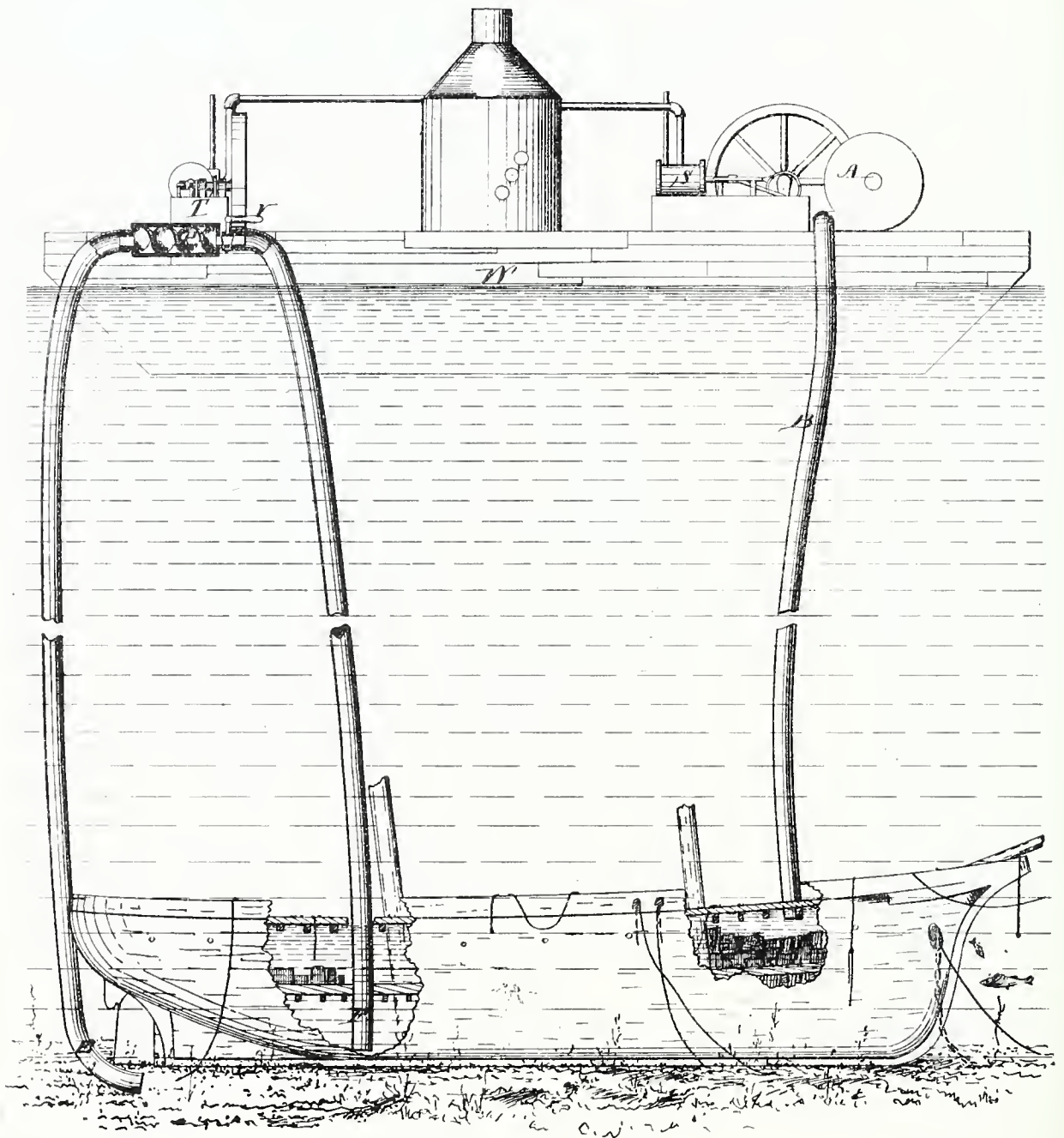
A. C. JOHNSTON,
JAMES BLACK.

EMILY E. TASSEY.

APPARATUS FOR RAISING SUNKEN VESSELS.

No. 180,286.

Patented July 25, 1876.



Witnesses

Harry J. Schultz
Chas. Scholler

Inventor

Emily E. Tasse

UNITED STATES PATENT OFFICE.

EMILY E. TASSEY, OF McKEESPORT, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR RAISING SUNKEN VESSELS.

Specification forming part of Letters Patent No. **180,286**, dated July 25, 1876; application filed June 17, 1876.

To all whom it may concern:

Be it known that I, EMILY E. TASSEY, of the borough of McKeesport, county of Allegheny, State of Pennsylvania, have invented and Apparatus for Raising Sunken Vessels, being a combination of my siphon propeller-pump with condensed-air chamber; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention without further invention or experiment.

In order to accomplish this I employ an air-pump, moved by steam or other power, connected with the sunken vessel by means of an air-tight tube fitting in an orifice in the deck of the vessel, the hatches and other openings of the vessel being closed. Through another orifice in the deck of the vessel is an air-tight tube, extending from the bottom of the hull of the vessel upward to the surface or near the surface of the water, thence curving downward to the same level or lower than the hull of the boat. At or near the surface of the water is a screw-propeller, the action of which is to impel the water from the hull of the vessel and discharge it at the end of the curved tube, the air-pump simultaneously filling the hull with condensed air. When all the water is discharged from the hull of the vessel and its space refilled with condensed air the vessel will easily be raised.

Referring to the drawings to more fully illustrate and describe my invention, A represents an air-pump, moved by steam-engine S. B is a tube (air-tight) connecting with the hull of the vessel. E P F is a curved tube, reaching from the bottom of the hold of the vessel upward to the engine T on the surface of the water W. At P is a screw-propeller, moved by the steam-engine T. At V

is a valve to cut off the course of the water or air when desirable. Steam-power being applied to the air-pump A and to the propeller P at the same time, the effect of their action is reciprocal. The propeller, forcing the water outward at E, tends to form a vacuum in the vessel, while the air from the air-pump fills that vacuum, and, furthermore, being condensed in the hull in the air-chamber formed by the egress of the water, presses on the whole surface of the water in the vessel, and forces it through the discharge-pipe with increased velocity, according to the law of transmitted pressure. Let the distance from the orifice E to the surface of the water W be thirty feet. The pressure of this perpendicular column of water, fifteen pounds to the square inch, is what prevents the natural siphon-flow of the water from F to E, and the power required from the propeller to overcome this pressure is but fifteen pounds to the square inch. Also, the water in the opposite arms of the curved tube being in equilibrium, the weight of the descending column E P assists in bringing up the ascending column F P, making a high velocity easily attained.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

As an improvement in devices for raising sunken vessels, the combination of the air-pump A and conducting-tube B with the curved water-discharge tube F P E, containing the screw-propeller P, substantially as and for the purposes set forth.

In testimony whereof I, the said EMILY E. TASSEY, have hereunto set my hand.

EMILY E. TASSEY.

Witnesses:

HARRY J. SCHLUTZ,
CHAS. SCHOELLER.

UNITED STATES PATENT OFFICE.

JOHANNA GERLITZ, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BITTERS.

Specification forming part of Letters Patent No. **171,658**, dated January 4, 1876; application filed November 17, 1874.

To all whom it may concern:

Be it known that I, JOHANNA GERLITZ, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Composition, being a Bitters; and I do hereby declare the following to be a full, clear, and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same.

My invention consists of a bitters, the chief ingredient thereof being convallaria or Solomon's seal, which has tonic virtues.

In compounding the medicine I employ the following ingredients: Two quarts of best brandy, three ounces of kümmel-seed, three ounces of fennel-seed, one ounce of malurt or wormwood, three ounces of wild-cherry bark, one-half ounce of convallaria-root, two ounces of orange-peel, one ounce of lavender, three gallons of water. These articles are united

and well mixed. The essence of the solid matters may be obtained by decocting, digesting, or steeping, after which the compound is decanted, the result being a preparation which will be found eminently serviceable for the purposes above stated.

The dose applied internally will be regulated according to requirements.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The composition—being a bitters—consisting of brandy, kümmel-seed, fennel-seed, wormwood, wild-cherry bark, convallaria-root, orange-peel, lavender and water, substantially in the proportions described.

JOHANNA GERLITZ.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. GRANT.

HARRIET M. CHAPMAN.
CORSET.

No. 172,969.

Patented Feb. 1, 1876.

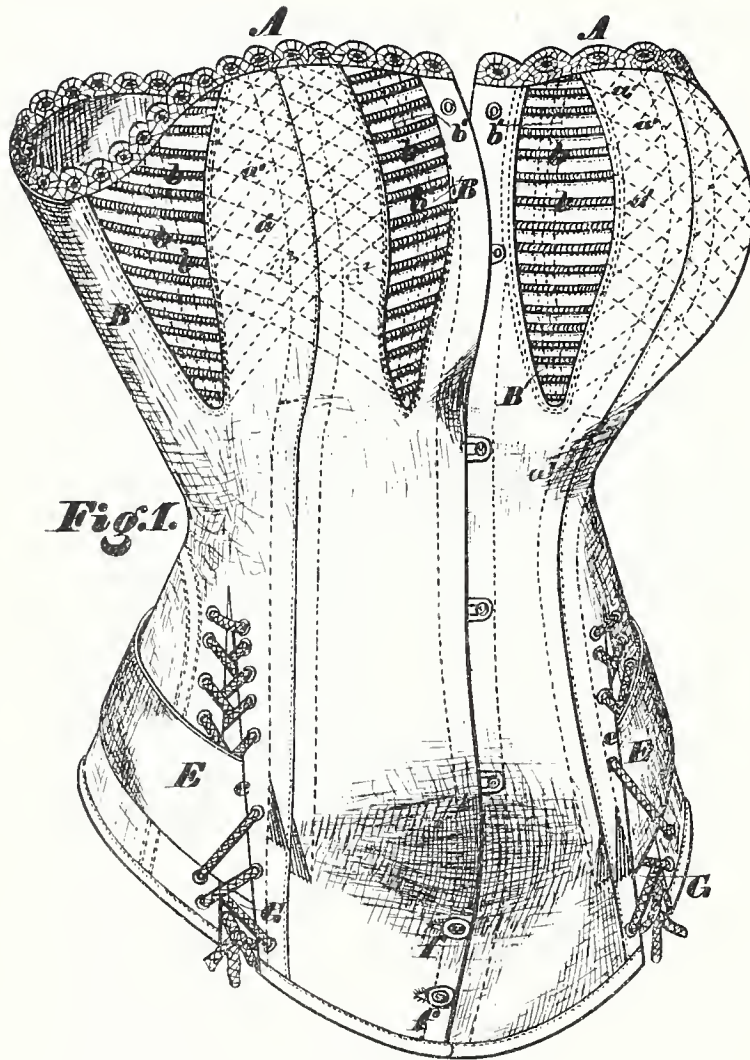


Fig. 1.



Fig. 2.

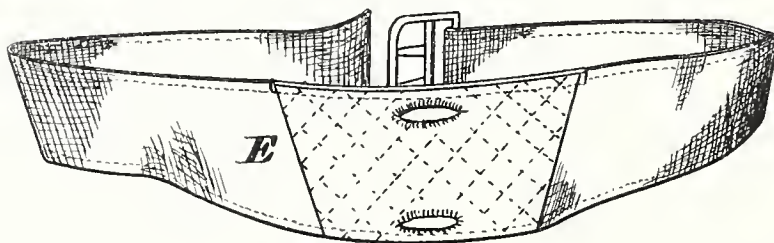


Fig. 5.

Witnesses

Inventor

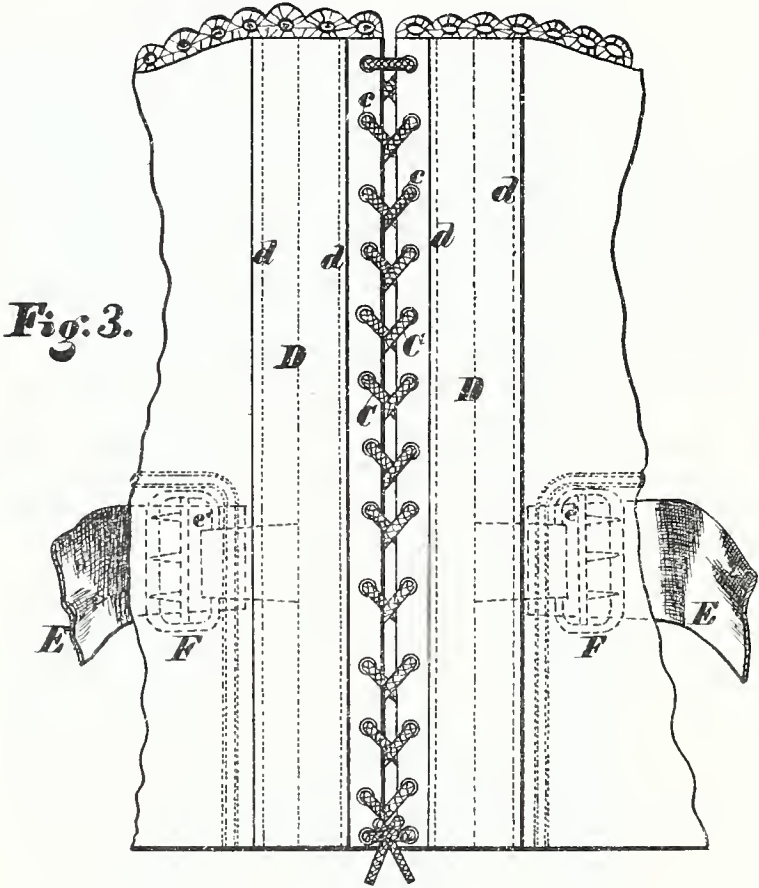
Saml. W. Starnes
John B. Rogan

Harriet M. Chapman
Connolly Bros., Attorneys

HARRIET M. CHAPMAN.
CORSET.

No. 172,969.

Patented Feb. 1, 1876.



Witnesses

Saml. J. Van Stavern
Jos. P. Connolly

Inventor

Harriet M. Chapman
Connolly Bros, Attorneys

UNITED STATES PATENT OFFICE

HARRIET M. CHAPMAN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CORSETS.

Specification forming part of Letters Patent No. **172,969**, dated February 1, 1876; application filed December 24, 1875.

To all whom it may concern:

Be it known that I, HARRIET M. CHAPMAN, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Corsets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective of my improvements. Fig. 2 is a transverse vertical section. Fig. 3 is a front view of the back of the corset; Figs. 4 and 5, detail views.

My improvements have in view the following objects: first, to make the puff or bust sufficiently full and firm without the employment of ribs or stays, thereby avoiding the inconvenience and danger frequently arising from the use of the latter, and obtaining at the same time greater flexibility than was heretofore possible; second, to obtain the required stiffness for the back, on either side of the lacing, without using the inside bones heretofore generally employed, and to prevent the warping and twisting at this point to which corsets made without my improvements have been generally liable; third, to provide a support, in the nature of an abdominal supporter, for corpulent persons, or those having an inconvenient fullness of form below the waist.

The nature of my invention consists in the peculiar construction and combination of parts hereinafter fully described, having reference particularly to the following features: to quilting the central or middle portion of the puff, and cording the gussets on either side thereof; to applying to the back of the corset, on the inside thereof, and on either side of the lacing, a stiffener of duck or canvas; and, lastly, to the employment of buckled straps, forming a support for the abdomen.

In the accompanying drawings, which illustrate a corset embodying my improvements, A A represent the puffs or expanded portions, designed to fit over the bust of the wearer, or to produce an elevation similar to the bust for persons having an unfeminine flatness of chest. The central portion of the puff is quilted—that

is, filled with cotton or other soft material, which is stitched in, the lines of stitching a^1 a^1 intersecting, as shown. B B represent gussets on either side of the central portion of the puff, said gussets being formed of two thicknesses of material, the outer one of which is corded in alternate horizontal lines $b b$. The lines of cording are designed and intended to be a little distance apart, so as to insure greater flexibility than if they were flush with one another, and are crossed by vertical lines of stitching, which pass through strips of some thick textile material, as drilling, on the inside of the corset, as shown at b' . Similar vertical strips a^2 are located on the inside of the central or quilted portions of the puffs, and are fastened thereto by similar vertical lines of stitching. The strips attached to the central parts of the puffs may, if desired, be extended to the lower edge of the corset, forming pockets for the stays below the bust. C C represent the cords by which the back of the corset is laced, said cords passing, as usual, through the vertical lines of eyelets $c c$. On the inside of this part of the corset are placed strips of duck, canvas, or other equivalent material, D D, having the requisite stiffness and flexibility, said strips being covered, if desired, by the material of which the corset is composed, and being secured in position by pasting or other equivalent means, preferably by vertical lines of stitching $d d$.

When the corset is desired for abdominal support, and is made the required length for that purpose, I provide it with straps E, having each one end secured at e , the other end e' being designed to pass into, and engage with, a buckle, F.

It should be remarked that when the corset is formed with the front lacing-gussets G the straps E should be attached, as shown, to the side of said gusset nearest the front of the corset, so that when said straps are drawn tight they will close up the gusset, or have a tendency that way, instead of opening it. Instead of the two straps E, a single one, fastened to the buttons f or stitched to the corset about the same point, may be used, as shown in Fig. 5.

What I claim as my invention is—

1. As a new article of manufacture, the cor-

set having the quilted puffs A A, with corded gussets B B, the duck stiffening D D, laced hip-gores G, and the adjustable back-strap E, secured to the front edges of said hip-gores, substantially as described.

2. A corset-puff having corded gussets B B, substantially as shown and set forth.

3. A corset-puff having a central quilted portion and corded gussets, substantially as shown and set forth.

4. The duck stiffening-pieces D D, applied to the inside of the corset-back on either side of the lacing-cords, as a substitute for the bones heretofore employed, substantially as shown and described.

5. In combination with the abdominal corset having laced hip-gores G, the strap E, secured to the front edges of the latter, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 29th day of October, 1875.

HARRIET M. CHAPMAN.

Witnesses:

SAML. J. VAN STAVOREN,
SAMUEL C. OGLE,
EDWD. SHAIN.

GEORGIANA L. TOWNSEND.

DEVICE FOR OPERATING SEWING-MACHINES.

No. 177,084.

Patented May 9, 1876.

Fig: 1.

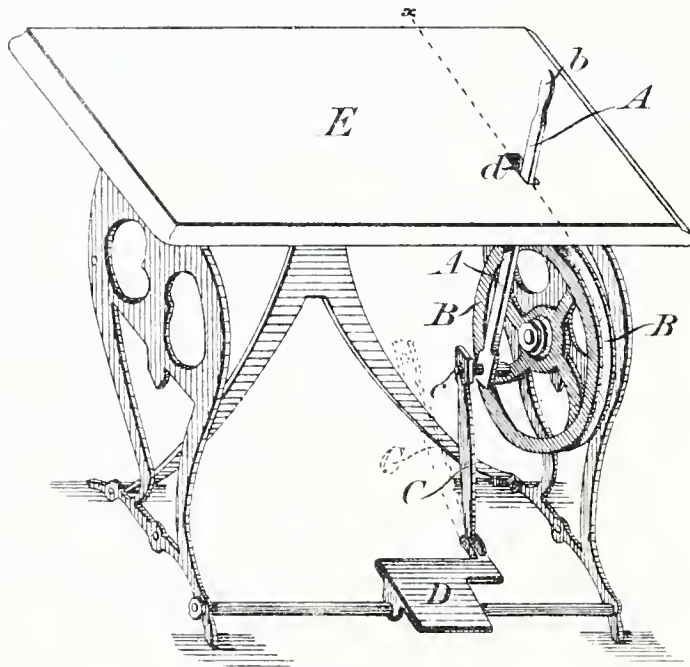
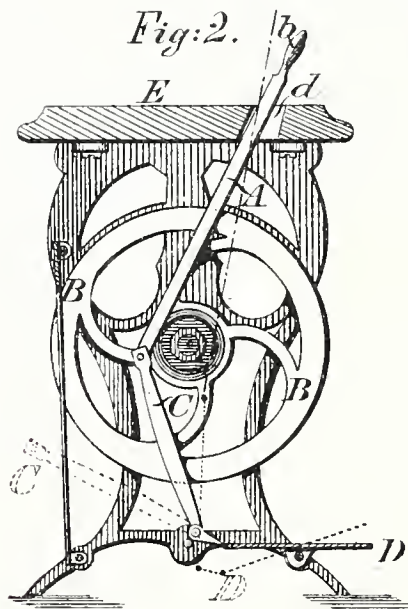


Fig: 2.



WITNESSES

James B. Philp
C. B. Towles.

By

Attorney

INVENTOR

Georgiana L. Townsend
W. R. Burris.

UNITED STATES PATENT OFFICE.

GEORGIANA L. TOWNSEND, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN DEVICES FOR OPERATING SEWING-MACHINES.

Specification forming part of Letters Patent No. **177,084**, dated May 9, 1876; application filed April 10, 1876.

To all whom it may concern:

Be it known that I, GEORGIANA L. TOWNSEND, of Philadelphia, in the county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Mechanical Movements for Operating Sewing-Machines, or other treadle-machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view. Fig. 2 is a transverse section on line *x* of Fig. 1.

My invention relates to mechanical movements for operating sewing-machines, or other treadle-machines, and consists of a vertical lever extending through a slot in the top of the machine, and connected with the crank-arm of the drive-wheel, and provided with a handle, adjusted above the top of the machine to be operated by a vertical motion of the hand, as hereinafter described.

In the drawings the improvement is illustrated on an ordinary treadle-machine having the drive-wheel at the right; but it is evident that with slight modifications it may be attached to and used on any other machine.

A represents a vertical lever, the lower end of which is attached to the crank-arm *c* of the drive-wheel B, and the upper part, provided with a handle, *b*, extends through a slot, *d*, in the top E of the machine. The lever is made long enough to extend the handle above the top of the machine sufficiently to be readily grasped by the hand and allow the vertical

motion by which it is operated. When the vertical lever is used the pitman C is detached, as shown by dotted lines in the drawings, thus dispensing with the weight of the pitman and treadle D, and securing the full power of the drive-wheel. With the vertical lever the machine may be run more rapidly and with less fatigue to the operator than by the treadle or ordinary crank. The machine may be readily adjusted at any time to be operated by the lever or by the treadle, to suit the preferences of the operator. And in long continued work the machine may be changed, in a moment, from the lever-movement to the treadle-movement, and vice versa, to rest the tired limbs of the operator without stopping the work.

My improved mechanical movement may be applied to any other machine operated by a treadle, as well as to sewing-machines.

What I claim as new, and desire to secure by Letters Patent, is—

An improved mechanical movement for operating sewing-machines, consisting of an upright lever, A, connected at the lower end to the crank-arm of the drive-wheel of the machine, its end passing through a slot in the table and provided at the top with a handle, *b*, and adjusted to be operated by a reciprocating vertical motion with the hand, substantially as and for the purposes described.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

GEORGIANA L. TOWNSEND.

Witnesses:

W. MORGAN LANSDALE,
THOMAS A. PORTER.



MARY F. SALLADE.

PLAITING-MACHINE.

No. 173,674.

Patented Feb. 15, 1876.

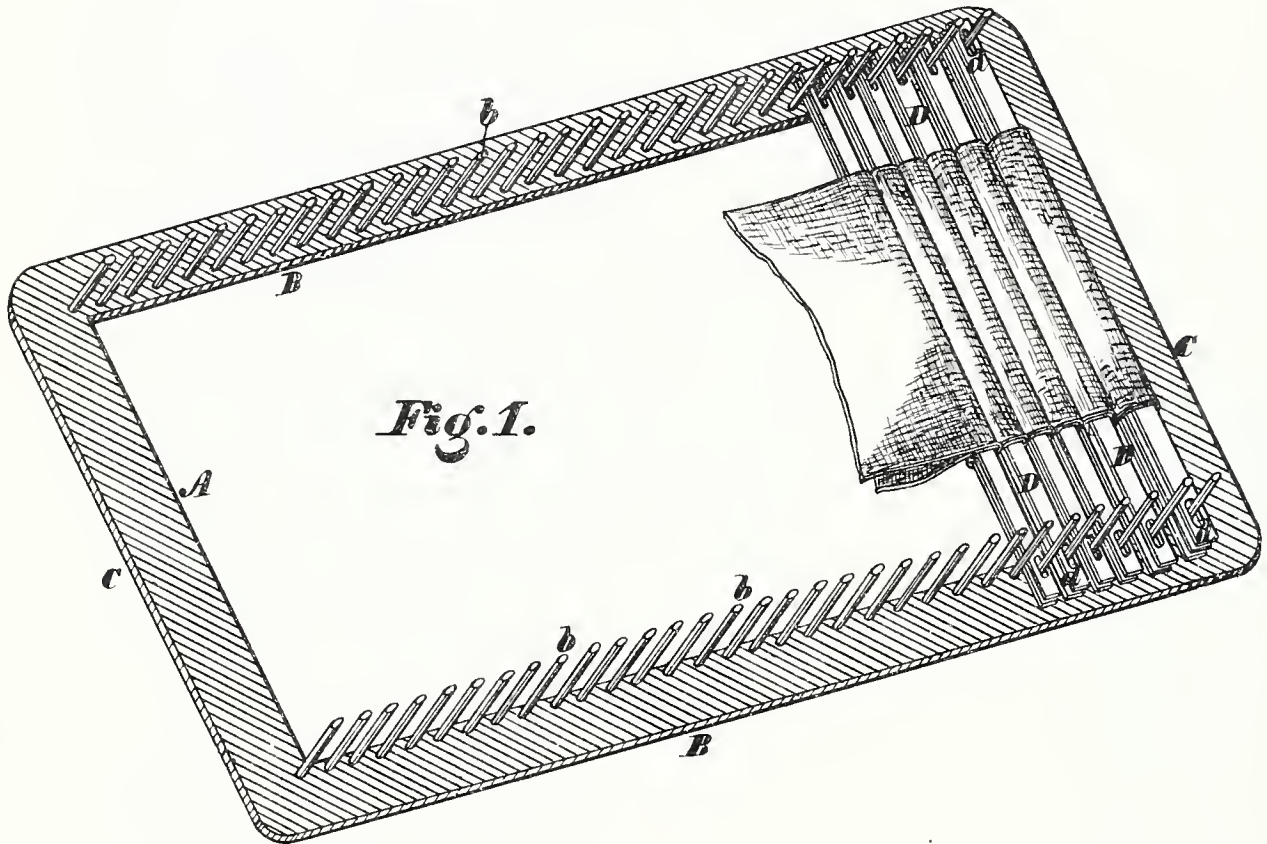


Fig. 1.

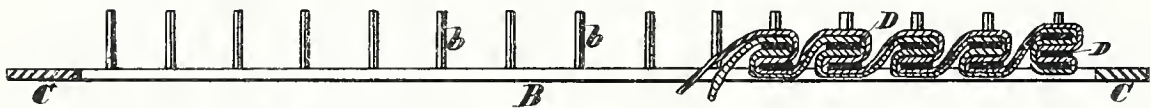


Fig. 2.

Witnesses

Inventor

Saml. J. VanStavoren
Jos. P. Connolly

Mary F. Sallade,

Connolly Bros. Attorneys

UNITED STATES PATENT OFFICE.

MARY F. SALLADE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PLAITING-MACHINES.

Specification forming part of Letters Patent No. **173,674**, dated February 15, 1876; application filed January 14, 1876.

To all whom it may concern :

Be it known that I, MARY F. SALLADE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Plaiting-Frames; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective of my invention, showing the manner of folding the velvet or other material for plaiting. Fig. 2 is a longitudinal vertical section of the same.

The object of my invention is to provide a device for plaiting textile materials, particularly adapted to those having a pile or nap, or other delicate finished surface, such as crape, velvet, &c.

My device consists of a rectangular oblong frame, preferably of metal, having studs or pins at regular intervals along its two longest sides. On these studs are to be placed tin slats having at each of their ends openings for the passage of said studs, these openings being, by preference, elongated in the direction of the length of the slats. These slats are designed to have the material to be plaited folded over them, as hereinafter fully described, which material is subsequently to be steamed or pressed, thus forming the plaits in such manner that they will be permanent, the operation not injuriously affecting the pile, nap, or other surface of the goods acted on to the slightest extent.

Referring to the accompanying drawing, A designates a metallic frame of rectangular oblong shape. B B are its two long sides, and C C its ends. Along the two sides B B are fixed studs or pins *b b*, at regular distances apart, in practice about a quarter of an inch. D D represent tin slats, designed to extend across the frame A, the studs *b b* entering elongated openings, *d*, in the ends of said slats. The width of these slats must be regulated by the distance between the pins *b b*, and must be less than such distance, so as to prevent said slats from overlapping. Were the slats to overlap or break joints, the mate-

rial to be plaited would be injuriously affected, particularly if such material should be the fine dress-goods, as velvet, crape, and the like, to which my invention is best adapted, and for which it is particularly designed. With such material, operated upon as I propose, the whole upper surface, or nap or pile, must remain free of contact with heated metal; otherwise such surface will be depressed according to the extent of contact, and will be correspondingly injured.

I shall now proceed to describe the method of pleating with my device. The material to be plaited, which is usually in long strips, is first folded, and a tin, D, passed between its folds, said tin being then laid on the frame A in such manner that the end pins *b b* will pass through the openings *d d*, the elongated form of such openings facilitating the slipping of the tin on the studs. Another tin is then placed on the same studs and the material folded over this once. Still another tin is then placed above the last-mentioned one and the material folded back over this. This starts the material on the frame. It is continued by folding the material in like manner over succeeding tins, as shown plainly in the drawing, only two tins being required for each stud, except the first, which requires three, the material to be plaited always passing beneath the lower tin and above the upper one. In this manner, when the frame is filled, the two surfaces of the fabric are exposed or uncovered, there being no part of the tins visible except the projecting ends. The frame being thus filled, the folded fabric requires to be steamed or pressed to insure permanency to the plaits. If such fabric be either velvet or crape, it should be folded over the slats with the pile or finished surface exposed to view from above the frame. After being thus folded over the tins, a dry cloth is laid on the plaited material, and a damp cloth placed over the dry one. The frame is now inverted, so as to rest on the pins *b b*, the damp cloth being below the dry one, and the latter just beneath the folded material. A hot iron of shape corresponding to that of the frame is then laid on the latter, generating steam from the damp cloth, such steam passing through the dry cloth and into the folded fabric.

The iron is allowed to remain on the frame for about ten minutes, or sufficiently long to completely dry the damp cloth, by which time the plaits will be thoroughly formed. With material not having a pile or nap, but having its two sides finished the same, or substantially the same, the operation is varied. The damp cloth is simply laid on the folded fabric and the iron passed down into the frame, pressing on such damp cloth until it is dry. The frame is then turned over and the operation just described repeated on the other side.

The advantage of the open frame over a board having pegs arranged like the studs *b b* is, that said open frame permits the folded fabric, when required, to be pressed on both sides, while with a board it could be pressed only on one. In the case of plaiting velvet or crape, such open frame also permits the operation of placing the dry cloth on the upper surface of the folded material, the damp cloth over this, so that when inverted the damp cloth will be below, the dry cloth over it, and the velvet or crape above, with its "wrong" side exposed to the influence of the heat radiated from the iron placed above it—an operation manifestly impossible with a board.

What I claim as my invention is—

1. A plaiting-frame having fixed pins and adjusting-slats, said frame being open to permit the fabric folded over the slats to be operated upon on both sides, the pins being at regular distances apart, and the width of the slats being less than the distance between said pins, substantially as shown and described.

2. In combination with the frame *A*, having pins *b b*, the slats or tins *D*, formed with elongated openings *d d*, to facilitate the application of said slats to the pins, as set forth.

3. The method herein described of plaiting fibrous material, by folding the same over slats in such manner as to leave the finished surface of the material uncovered, and then fixing such plaits permanently by steaming and pressing the same, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 31st day of December, 1875.

MARY F. SALLADE.

Witnesses:

M. DANL. CONNOLLY,
GEO. C. SHELMEKDINE.

KATE C. BARTON
SEWING-MACHINE.

No. 182,096.

Patented Sept. 12, 1876.

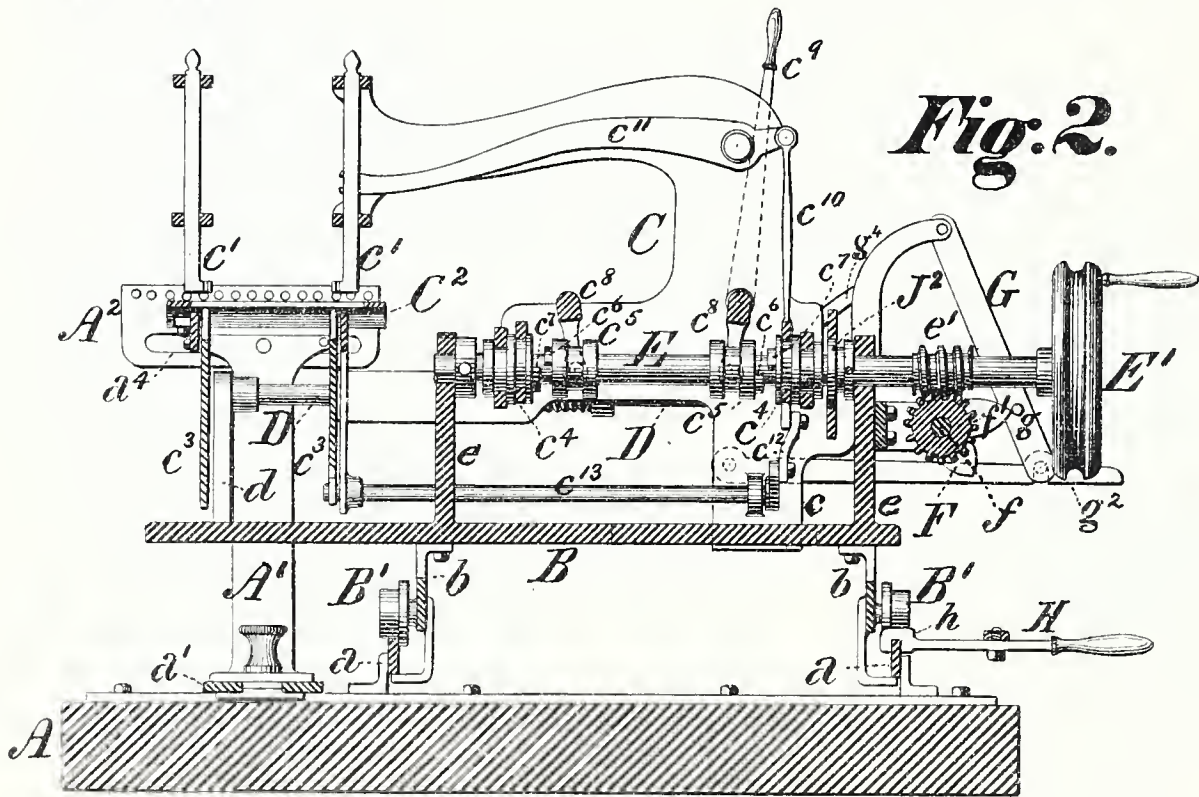


Fig. 2.

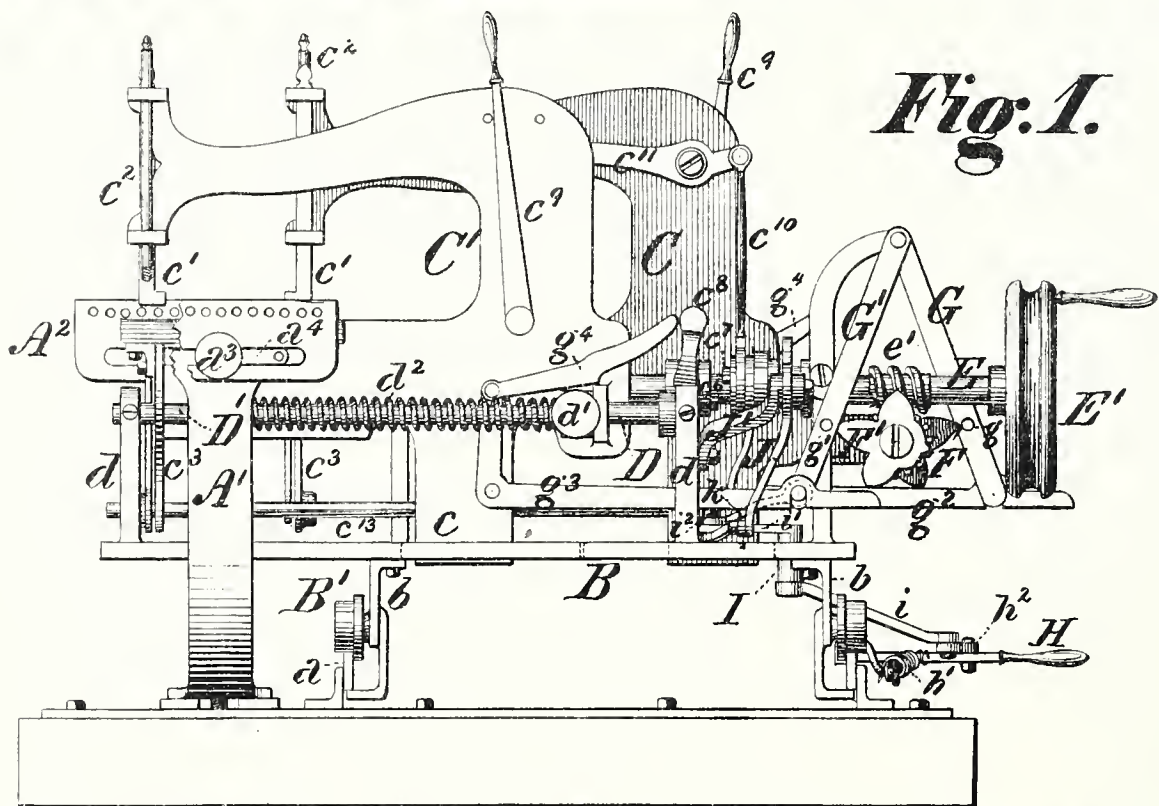


Fig. 1.

WITNESSES

Geo. A. Vaillant.
D. L. Collier.

INVENTOR

Kate C. Barton,
by J. Snowden Bell,
att'y

KATE C. BARTON.
SEWING-MACHINE.

No. 182,096.

Patented Sept. 12, 1876.

Fig. 3.

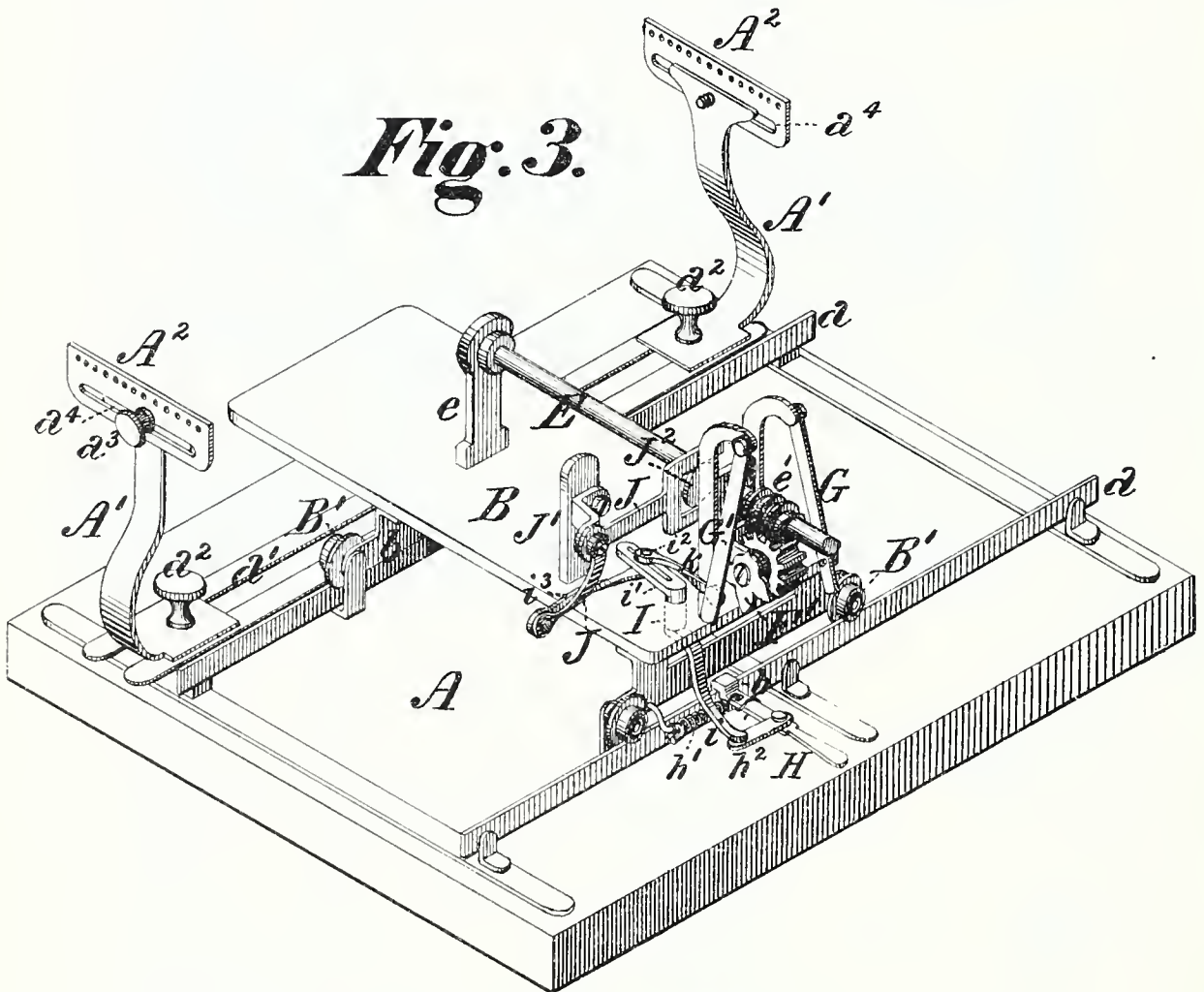
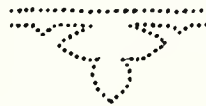
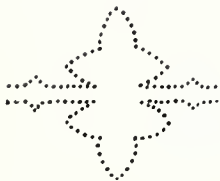


Fig. 4.



WITNESSES

Geo. A. Vaillant
D. L. Collier

INVENTOR

Kate C. Barton,
by J. Snowden Bell,
att'y.

UNITED STATES PATENT OFFICE.

KATE C. BARTON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **182,096**, dated September 12, 1876; application filed March 25, 1876.

To all whom it may concern:

Be it known that I, KATE C. BARTON, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a specification:

The object of my invention is to provide a machine for sewing two or more seams, each and all of which may be either straight for their whole length, partly straight and partly curved or zigzag, according to a prescribed design, or composed entirely of a series of curved or zigzag figures, as may be required; to which end my improvements consist in the combination of a stationary table or bed plate, an adjustable cloth-holder, a carriage traversing on rails on the bed-plate, a series of frames, each carrying separate sewing mechanism, and having the capacity of reciprocating at right angles to the direction of the movement of the carriage, a driving-shaft and pattern-cams which operate the sewing mechanism and impart reciprocating movement to the frames carrying the same, and a feeding device, operated from the driving-shaft, and imparting longitudinal movement to the carriage, these members being combined for joint operation in manner hereinafter fully set forth.

In the accompanying drawings, Figure 1 is an end view of a sewing-machine embodying my improvements; Fig. 2, a vertical transverse central section of the same; Fig. 3, a view in perspective, with the sewing mechanisms and their supporting-frames removed; and Fig. 4, a diagram showing the form of seams made by the machine.

To carry out the object of my invention, I provide a table or bed-plate, A, having secured longitudinally upon it two track-rails, *a*, and a slotted guide-bar, *a*¹, upon which two vertical posts, A', may be adjusted at any desired distance apart by set-screws *a*². A cloth-holder, A², is connected to each of the posts A' by a set-screw, *a*³, passing through a long slot, *a*⁴, in its lower side, its upper side being suitably recessed or perforated for the reception of one end of the fabric to be sewed. By this arrangement both longitudinal and trans-

verse adjustment of the fabric may be made, and the same stretched as tightly as required.

A carriage, B, is supported on flanged wheels B', which are journaled on its feet *b*, and traverse the track-rails *a* of the table. Two or more frames, C C¹, each carrying a needle-bar, *c*¹, presser-bar *c*², shuttle-carrier *c*³, and an eccentric, *c*⁴, provided with proper connections for operating the needle-bar and shuttle-carrier, are mounted loosely on horizontal guide bars or rods D D', secured to standards *d* upon the carriage B, at right angles to the rails *a*, upon which the latter traverses. A cloth-plate, C², slotted to permit the passage of the needles through it, is secured to one of the frames, its slot being common to both needles. A downwardly-projecting arm, *c*, on each frame enters a transverse slot in the carriage, and, in connection with the guides D D', maintain the same in vertical position, and insures its rectilinear traverse when acted upon by the cam to be hereinafter described.

A horizontal driving-shaft, E, is mounted in bearings upon standards *e e* on the carriage B, and is rotated by a crank-wheel, E'. The eccentrics *c*⁴, which operate the sewing mechanisms of the frames C C¹, are each loose upon the driving-shaft, and are, respectively, caused to rotate therewith by clutches *c*⁵, one of which is provided for each frame, and has a feather which enters a longitudinal groove in the driving-shaft, so as to admit of end motion thereon while rotating therewith. Pins or catches *c*⁶ on the ends of the clutches engage corresponding stops *c*⁷ on the eccentrics, when moved into gear therewith by shippers *c*⁸ pivoted to the frames C C¹, and provided with levers *c*⁹.

It will thus be apparent that either or both of the sewing mechanisms can be made to operate or be stopped whenever required. The strap of each eccentric is connected by a rod, *c*¹⁰, to one of the needle-arms, *c*¹¹, and by a link, *c*¹², to one of the shafts, *c*¹³, which operate the respective shuttle carriers or loopers of the frames.

Reciprocating motion, at right angles to the line of the track-rails *a*, is imparted to the frames C C¹ in the following manner: A worm,

e^1 , on the driving-shaft E, meshes with a worm-wheel, f' , on a lower transverse shaft, f , mounted in bearings on the carriage B, and having pattern-cams F F' secured upon its ends. The outline of the cams is made to conform with the curved or zigzag design which it is desired to produce upon the seam, and the frames C C', with their sewing mechanism, are moved laterally in accordance therewith by the action of the cams on pins g g^1 attached respectively to the vibrating arms G and G', the upper ends of which arms are pivoted to standards on the carriage B, and their lower ends connected by links g^2 g^3 to the frames C and C' respectively.

The mode of attaching the links g^2 g^3 to the arms G G' is by gabs or notches, which fit over pins on the links, so that one or both of the links may be disengaged from the arms at pleasure by the unhooking-levers g^4 , for the purpose of causing the corresponding frame or frames to remain stationary relatively to the carriage B.

The straight portion of the seams, if any, will be sewed during such periods as the reciprocating motion of the frames is thus interrupted. If a seam or seams straight through their entire extent are to be sewed, the frames, after being disconnected as above, may be clamped fast at any desired distance apart upon their guide-bars D D' by set-screws d^1 .

In this instance, the frames are shown as moved toward the cloth-holders by the pattern-cams, and in the opposite direction by springs d^2 coiled upon the guide-bars D D'; but if the pattern-cams be formed with grooves so as to embrace the pins of the arms G G', it is evident that they will move the frames in both directions, and, in such case, the springs may be dispensed with.

The carriage B is fed longitudinally along the rails a by a friction-clutch lever, H, having at its inner end a jaw, h , which embraces one of the rails, and is held in such position thereon as will permit motion of the carriage only in a forward direction by a coiled spring, h^1 , which connects the lever with a pin on the carriage. A link, h^2 , is pivoted at one end to the clutch-lever H, and at the other to the lower arm i of a vertical rock-shaft, I, the upper arm i^1 of which is slotted to receive a pin, i^2 , connected by a link, i^3 , to the lower arm of a bell-crank, J, pivoted to a bearing, J^1 , on the carriage, and also connected by a link, k , to a pin on the lower end of the vibrating arm G', which operates the frame C'. The bell-crank J is oscillated by a cam, J^2 , on the driving-shaft E, working in a recess or frame in the end of its upper arm. The vibrating movement of the bell-crank is transferred to the rock-shaft I, and moves the carriage B forward at each revolution of the cam J^2 , acting against the clutch-lever H as a fulcrum on the rail a , the lever being correspondingly

drawn forward at each revolution by the spring h^1 .

The purpose of the link k is to vary the throw of the arm i^1 proportionately with the degree of transverse motion of the frames C C' on the carriage, and it should be so arranged as to be thrown out of gear with the arm G' when sewing a straight seam.

I claim as my invention and desire to secure by Letters Patent—

1. The combination of a traveling carriage, two or more frames carrying sewing mechanism, and moving transversely on said carriage and mechanism, substantially as set forth, for imparting independent transverse movement upon the carriage to either or both of said frames, as and for the purpose described.

2. The combination of a traveling carriage, a frame carrying sewing mechanism and moving transversely on said carriage and mechanism, substantially as described, whereby the longitudinal movement of the carriage and the transverse movement of the frame are effected by the same pattern-cam.

3. The combination of a traveling carriage and one or more frames mounted and moving transversely thereon, each carrying a sewing mechanism in which the shuttle-carrier vibrates transversely to the line of movement of its carrying-frame, substantially as set forth.

4. The combination of two frames, each carrying sewing mechanism, and moving parallel to a driving-shaft, with said driving-shaft provided with mechanism, substantially as described, whereby the sewing mechanisms of the two frames are operated without regard to the relative positions of the frames and shaft, substantially as set forth.

5. The combination of a traveling carriage, two frames carrying sewing mechanisms and moving upon the carriage transversely to its line of movement, and a cloth-plate attached to one of the frames, and having a slot common to the needles of both frames, substantially as set forth.

6. The combination of a driving-shaft, two frames mounted and moving longitudinally thereon, and each carrying a sewing mechanism, and clutches and clutch-levers on said driving-shaft, whereby said sewing mechanisms may be operated therefrom either singly or together, substantially as set forth.

7. The combination of the frames C C', needle-bars c^1 c^1 , shuttle-carriers c^3 c^3 , driving-shaft E, and shuttle-carrier shafts c^{13} c^{13} , operated by said driving-shaft, substantially as set forth.

8. The combination of a pattern-cam, F, driving-shaft E, frame C, carrying sewing mechanism, and mechanism, as described, whereby said frame is connected to and moved by the pattern-cam.

9. The combination of a driving-shaft, E, worm e' , worm-wheel f' , pattern-cam F, and

traveling carriage B, provided with a feed mechanism variably operated from the pattern-cam by mechanism, substantially as set forth.

10. The combination of the carriage B, frames C C', and guide-bars D D', substantially as set forth.

11. The combination of the carriage B, movable frames C C', driving-shaft E, pattern-cams F F', vibrating arms G G', and connecting-links $g^2 g^3$, substantially as set forth.

12. The combination of the rail a , carriage B, clutch-lever H, spring h^1 , link h^2 , rock-shaft I, arms $i i^1$, links $i^3 k$, bell-crank J, cam J^2 , and vibrating arm G', substantially as set forth.

KATE C. BARTON.

Witnesses:

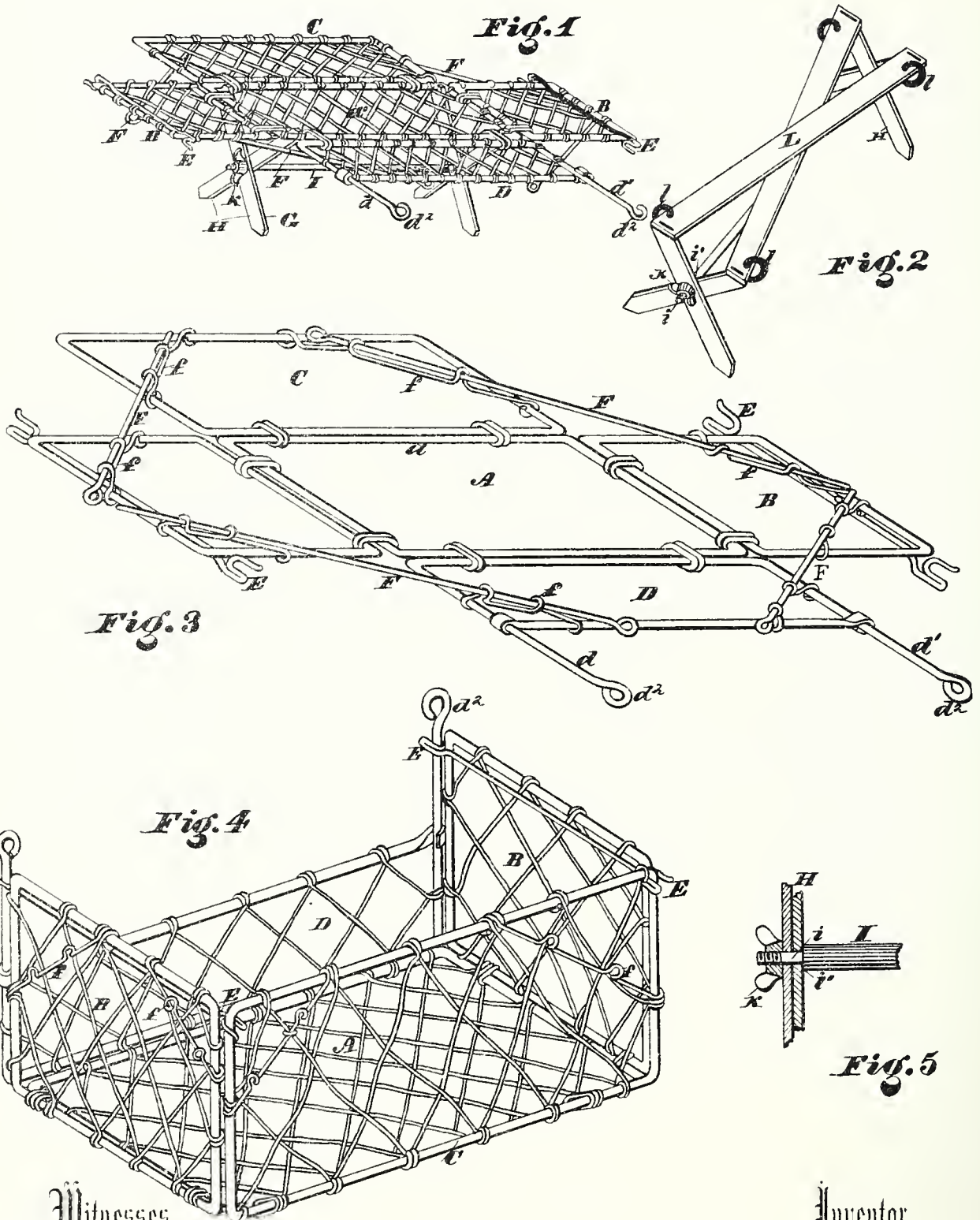
J. SNOWDEN BELL,
F. E. HARDING.

EMMA B. CARVER.

FOLDING FLOWER BALCONY AND STAND.

No. 181,639.

Patented Aug. 29, 1876.



Witnesses

Saml. J. Van Stavorren.
 Jos. B. Connolly.

Inventor

Emma B. Carver,
 Connolly Bros, Attorneys

UNITED STATES PATENT OFFICE.

EMMA B. CARVER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN FOLDING FLOWER BALCONY AND STAND.

Specification forming part of Letters Patent No. **181,639**, dated August 29, 1876; application filed June 30, 1876.

To all whom it may concern:

Be it known that I, EMMA B. CARVER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Folding Flower Balcony and Stand; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective of my invention when used as a table or stand. Fig. 2 is a modification of the table-support. Fig. 3 is a perspective of the table inverted, the woven wire being broken away. Fig. 4 is a perspective of the flower-balcony; Fig. 5, detail section.

The object of my invention is to provide a device which I term a flower-balcony, and which is intended for the reception of pots containing plants, said balcony being intended to hang out of windows, to allow said plants the benefit of sunshine and fresh air, and being convertible into a stand and portable table, upon which said pots and plants can be arranged indoors.

My invention, accordingly, consists of a convertible folding flower balcony and stand or table, constructed as hereinafter more fully described.

Referring to the accompanying drawing, A designates an oblong frame formed of an iron rod or bar, *a*, and wire-work *a'*, the latter being twisted, woven, or otherwise arranged in any suitable manner. B, B, and C are similarly-constructed frames, hinged to the frame A, so as to fold thereon, as shown in Fig. 4, and turn up to form the sides of a case, as shown in Fig. 4. D is another narrower frame of similar construction, having, however, two rods or bars, *d d'*, the ends of the latter being turned to form hooks or eyes *d''*, by means of which the balcony may be hung upon nails driven in the wall outside the house.

When the frames turn up, as in Fig. 4, they are retained in the position shown by means of spring-clamps or catches E, or by other equivalent devices, such as hooks or latches.

To form a stand, the sides of the balcony are turned down until they are brought in the same plane with the frame A, and are

held in this position by means of rods F F passing through eyes *f f*.

The leaf thus formed may be laid upon a table, affording space for ventilation below the bottom of the pots and said table, or it may, by preference, be set upon a stand or support, G, and said pots then placed upon it. Said stand is formed of the legs H H, which are arranged in the form of an X, at each end of a bar, I. Said bar I is turned down to form a smooth journal, *i i*, at each end, on which the legs are placed, being held in position and screwed or forced up against the shoulders *i' i'* by thumb-nuts K K.

To pack this contrivance for transportation, or to stow away when not in use, the rods F F are withdrawn from the eyes *f f*, and the sides B B C D folded down upon the frame or bottom A.

The legs H H are taken off the rod or bar I, and said bar and legs, with the rods F F, laid on said frame A.

A modified form of stand is shown in Fig. 2, wherein diagonal bars L are used to connect the upper ends of the legs H H to prevent wobbling, rings *l l* being also employed to make a more secure connection with the frame A.

What I claim as my invention is—

1. A folding flower-balcony, composed of the bottom or frame A, and hinged sides B B C D, substantially as shown and described.

2. In combination with the folding sides of a flower-balcony, the holding devices E for holding said sides in an upright position, substantially as shown and described.

3. In combination with the folding sides B B C D, formed or provided with eyes or loops *f f*, the rods F for retaining said sides in the same plane as the bottom or frame A, substantially as shown and described.

4. The combination of the convertible flower balcony and stand, composed of the frames A B C D, with the stand G, composed of bar I and legs H H, the several parts being constructed and arranged for operation, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 26th day of June, 1876.

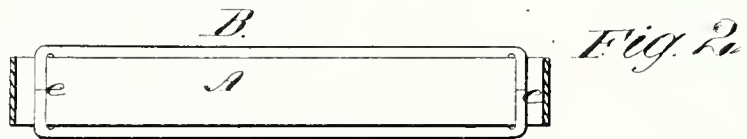
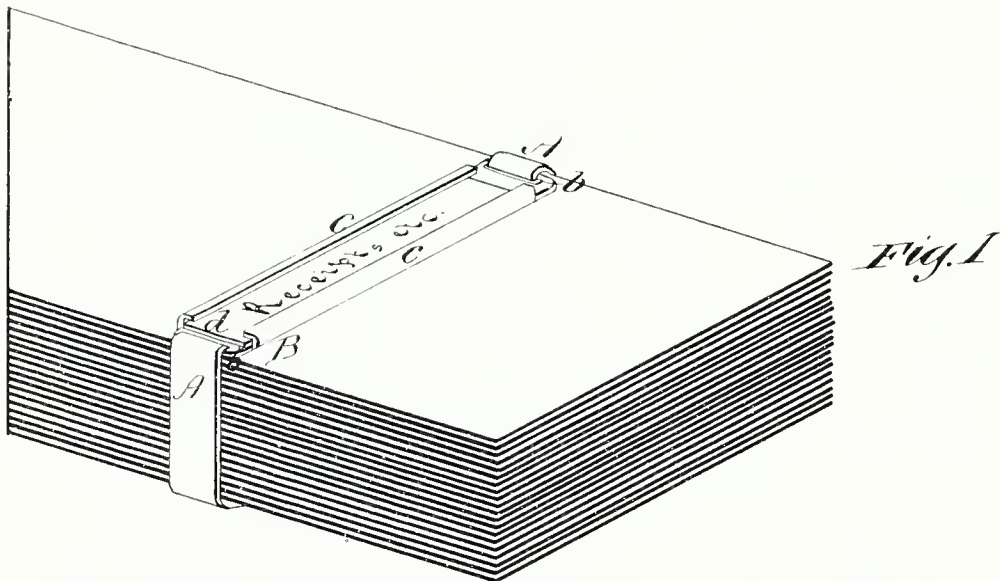
Witnesses: EMMA B. CARVER,
J. HENRY CARVER,
CHAS. F. VAN HORN.

JULIA FOSTER.

BILL FILE.

No. 181,663.

Patented Aug. 29, 1876.



Witnesses

Jos. P. Connolly
A. A. Connolly

Julia Foster
Connolly & Co.
Attorneys

Inventor

UNITED STATES PATENT OFFICE.

JULIA FOSTER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BILL-FILES.

Specification forming part of Letters Patent No. **181,663**, dated August 29, 1876; application filed May 29, 1876.

To all whom it may concern:

Be it known that I, Mrs. JULIA FOSTER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Bill-Files; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective view of my invention. Fig. 2 is a sectional view.

The object of this invention is to furnish a convenient and simple means for indicating the general contents of a file or package of folded papers or documents of any kind; and it consists in providing the rubber band with which the package or file is bound with a flanged metallic plate, of special construction, holding a slip of paper or pasteboard, upon which is written or printed the required indorsement. The slip is detachable, so that the indorsement may be changed when desired.

Referring to the drawings, A designates an ordinary rubber band, of the kind used in binding together folded papers or documents. B is the slip-holder, consisting of a plate of metal slightly wider than the band and formed with a slot, *b*, at each end, for the passage of

the band, and flanges *c* on the edges, to hold the slip *d*. The band is passed into the slots through slits *e* in the ends of the plate, the same being sufficiently opened by springing the metal. These slits are covered by the band, which passes over the ends of and then behind or under the plate, as shown.

The plate may be easily shifted lengthwise of the band, and may be made of any desirable length, width, or shape, to suit the taste of the user or the conditions of use. Metal is suggested as the most preferable material of which to make the plate, but any other material, as wood, ivory, hard rubber, and the like may be employed.

What I claim as new, and desire to secure by Letters Patent, is—

As a new article of manufacture, the improved file for papers, consisting of the flanged plate C, adapted to hold the indorsement-slip *d* and having the slotted and slit ears *b* and the endless elastic band A combined, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 24th day of May, 1876.

JULIA FOSTER.

Witnesses:

THOS. A. CONNOLLY,
CHAS. F. VAN HORN.

JULIA FOSTER.
BED DUSTING RACK.

No. 178,135.

Patented May 30, 1876.

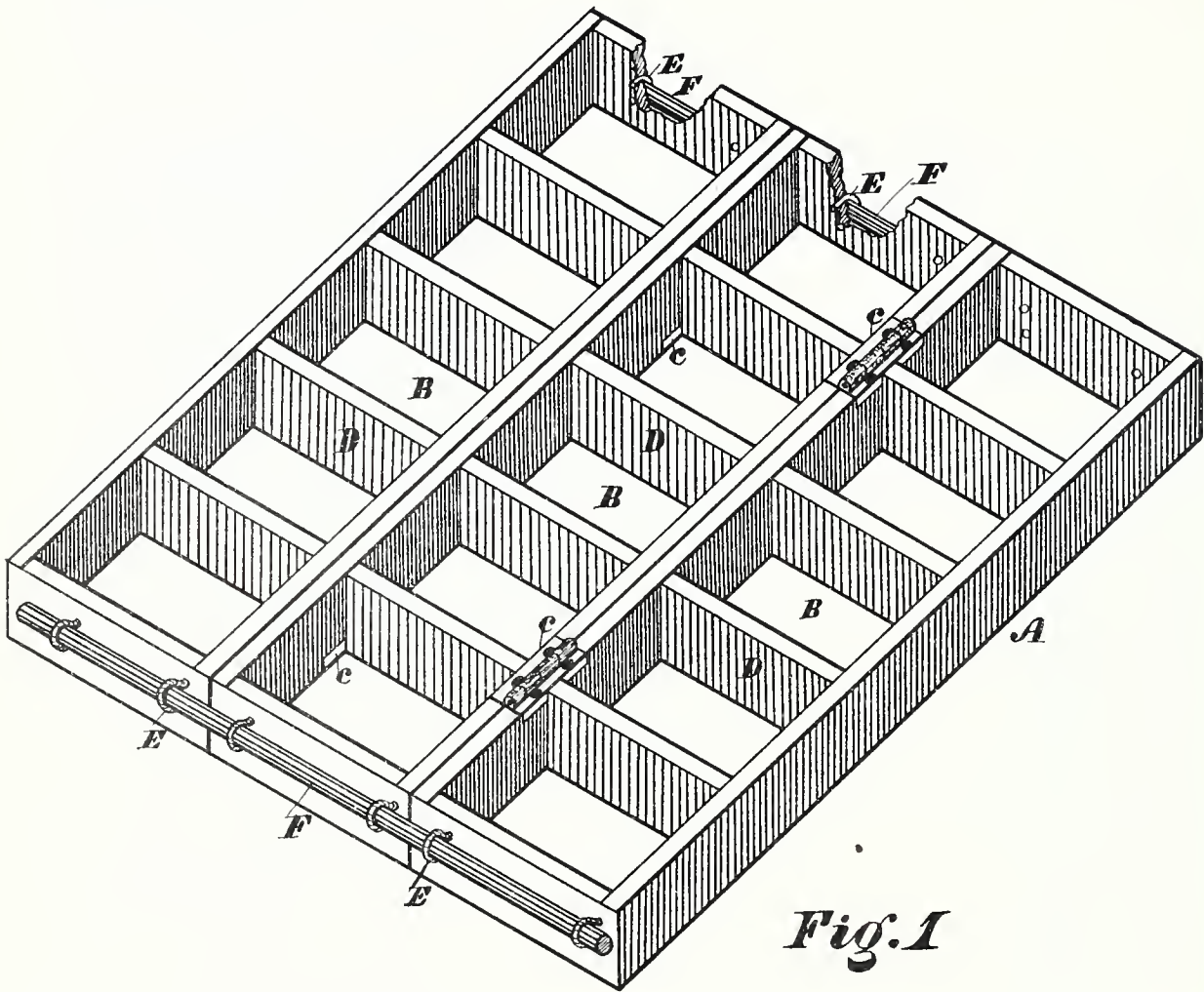


Fig. 1

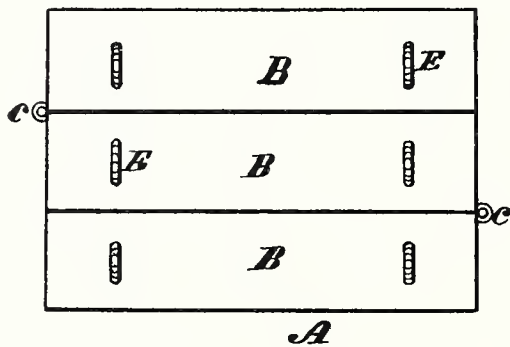


Fig. 2

Witnesses.

Saml J. Van Stavern
Jos B Connolly

Inventor

Mrs Julia Foster,
Connolly Bros, Attorneys

UNITED STATES PATENT OFFICE.

JULIA FOSTER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN BED-DUSTING RACKS.

Specification forming part of Letters Patent No. **178,135**, dated May 30, 1876; application filed March 14, 1876.

To all whom it may concern:

Be it known that I, Mrs. JULIA FOSTER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Bed-Dusting Rack; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective of my invention opened for use. Fig. 2 is an end view of the same when folded.

The object of my invention is to provide a device or apparatus mainly intended for household use, and designed to facilitate the removal of dust from bedding, carpets, and other such cumbersome articles.

My invention consists of a wooden rack, preferably square or of rectangular oblong shape, formed in hinged sections provided with cross-bars or stays, and metallic rods, which serve to render the rack rigid when opened or extended for use.

Referring to the accompanying drawing, A designates the rack, formed of three or more oblong sections, B B B, hinged alternately on opposite sides, as shown at *c c*, so as to permit said rack to be folded into the width of one of said sections. D D are cross-bars or stays, extending transversely between the side pieces of each of the sections B B. E E are staples or eye-nails in the ends of the sections B B; and F F are metallic rods passing through the same, and serving to keep the rack rigid when extended for use.

The method of operation is as follows: The

rack is extended, as shown in Fig. 1, and supported above the ground or floor by any suitable means, as by placing a chair under each of its four corners. The bed or other article to be dusted is then laid upon the rack and beaten, the dust and other impurities passing down to the ground or floor beneath.

When the rack is not needed for immediate use, it can be packed or folded for convenient stowage in a closet by withdrawing the rods F F from the eyes E E, and turning the sections over one another on their hinges, as shown in Fig. 2.

For the rods and eyes which serve to keep the frame rigid when opened, other equivalently-operating devices of somewhat different construction may be substituted without departing from the spirit of my invention.

What I claim as my invention is—

1. A bed-dusting rack, composed of folding or hinged sections B B, substantially as shown and described.

2. In combination with the sections B B, the devices F F, for keeping the rack rigid when extended for use, as set forth.

3. A dusting-rack composed of a series of rectangular frames, each consisting of cross-pieces extending from side to side, and transverse bars or braces at right angles thereto, so as to form square or rectangular interstices, as shown.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of March, 1876.

MRS. JULIA FOSTER.

Witnesses:

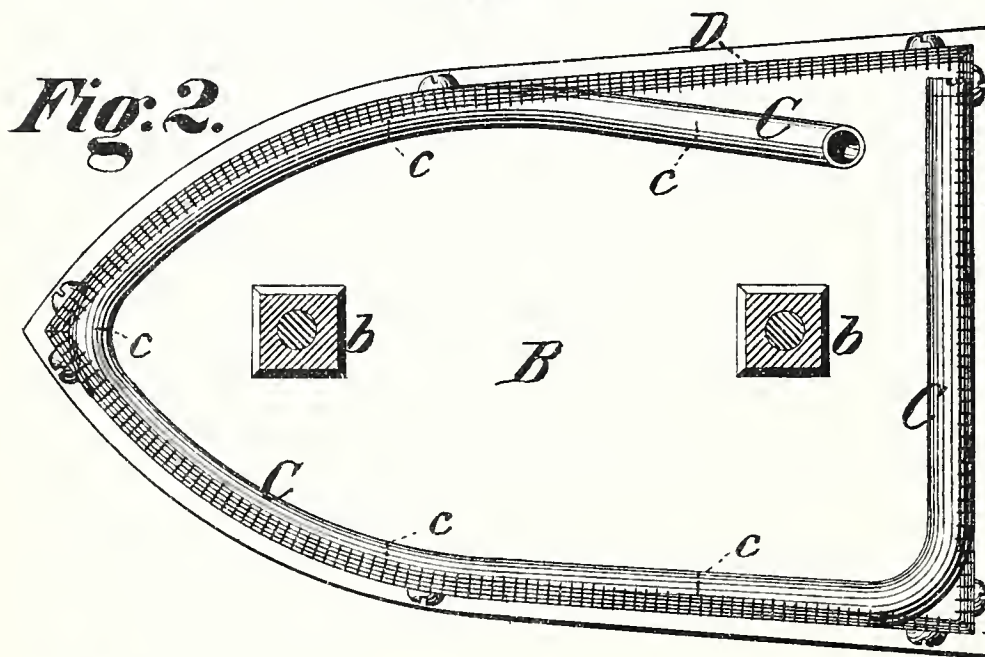
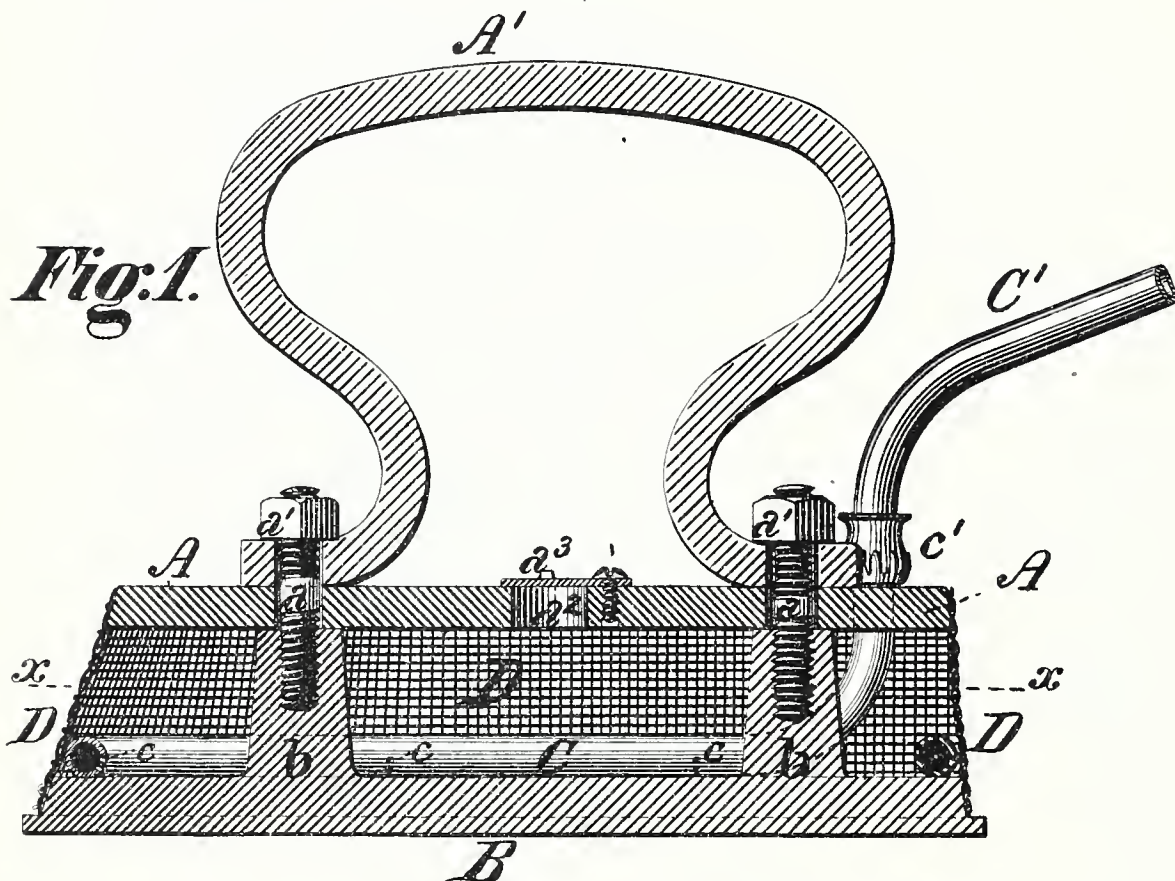
M. DANL. CONNOLLY,
CHAS. F. VAN HORN.

MARY P. JACKSON & SARAH P. BALL.

SELF-HEATING SMOOTHING IRON.

No. 177,643.

Patented May 23, 1876.



Witnesses

Geo. A. Vaillant

D. L. Collier

Inventors.

Mary P. Jackson, Sarah P. Ball,
by J. Mendenhall,
Attorney.

UNITED STATES PATENT OFFICE.

MARY P. JACKSON, OF KENNET SQUARE, AND SARAH P. BALL, OF FRANKFORD, PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SELF-HEATING SMOOTHING-IRONS.

Specification forming part of Letters Patent No. **177,613**, dated May 23, 1876; application filed March 30, 1876.

To all whom it may concern:

Be it known that we, Mrs. MARY P. JACKSON, of Kennet Square, in the county of Chester and State of Pennsylvania, and Mrs. SARAH P. BALL, of Frankford, in the city and county of Philadelphia, and State aforesaid, have invented certain new and useful Improvements in Smoothing-Irons, of which the following is a specification:

The object of our invention is to provide a smoothing-iron of simple and economical construction, which can be heated continuously when in use by gas-flames applied to its interior surface, and be thereby maintained at a suitable and constant heat, obviating the necessity of either changing irons or reheating; to which ends our improvements consist in the combination of an upper and a lower section, an intermediate inclined web of wire-gauze, and a gas-supply pipe resting upon or near the top of the lower section, and provided with a series of burner-openings contiguous thereto, as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a vertical longitudinal central section of a smoothing-iron embodying our improvements; and Fig. 2, a horizontal section of the same at the line *xx* of Fig. 1.

In the construction of our improved smoothing-iron, therein shown, an upper section, A, and a lower section, B, are connected by bolts or studs *a* and nuts *a*¹. The bolts *a* are screwed into vertical standards *b* on the lower section, which maintain the two sections at such distance apart as may be proper to accommodate the internal heating device, presently to be described. A handle, A', of any suitable material or materials, is attached to the upper section. The two sections are substantially similar in form, the lower being of larger dimensions than the upper, and being arranged relatively thereto, so as to project beyond the latter for a greater distance at the front of the iron than at the back.

A gas-supply pipe, C, is passed through an

opening in the upper section A, and rests upon or near the top of the lower section B, being bent conformably with the outline of the latter, and terminating with a blank or closed end. A suitable nozzle, *c*', is provided upon the end of the supply-pipe, above the upper section, for the attachment of a flexible tube, C', through which gas is conveyed to the pipe C from a wall-bracket or gas-alier. A series of burner-openings, *c*, either slots or holes, are formed in the pipe C as near as practicable to the lower section B, so as to project the flame thereon. The gas is ignited through an opening, *a*², in the upper section, provided with a hinged or pivoted cap or cover, *a*³.

A web of wire-gauze, D, extends from the upper to the lower section, around the iron, so as to completely inclose the space between the two sections, and is inclined outward from the upper to the lower, in correspondence with the difference of their dimensions. The inclination of the wire-gauze web being greater toward the front end of the iron, by reason of the greater projection at that point of the lower section, a forward and upward draft is induced to support the combustion of the gas, as the products of combustion find their readiest escape upon the portions of the web having the greatest inclination. We are thus enabled to provide for supporting combustion and discharging the products without the use of a chimney, by the aid of a medium, which can be conveniently applied, and is of slight weight.

We claim as our invention, and desire to secure by Letters Patent—

1. The combination, with a smoothing iron, composed of the upper and lower sections A B, of the gas-supply pipe C, coiled on the lower section to project the flame on said section, substantially as set forth.

2. The combination, in a smoothing-iron, of the upper section and lower section with intervening space, and an interposed web of

wire-gauze surrounding and inclosing said space, substantially as set forth.

3. The combination, with a smoothing-iron, of a wire-gauze web, having a greater inclination outward toward the front than at the rear of the iron, substantially as set forth.

4. The combination of the upper and lower sections, the interposed wire-gauze web, the gas-supply pipe, having a series of burner-openings, and an opening and cap for the

ignition of the gas, substantially as set forth.

MARY P. JACKSON.

SARAH P. BALL.

Witnesses as to M. P. JACKSON:

WILLIAM CHANDLER,

HELEN JACKSON.

Witnesses as to S. P. BALL:

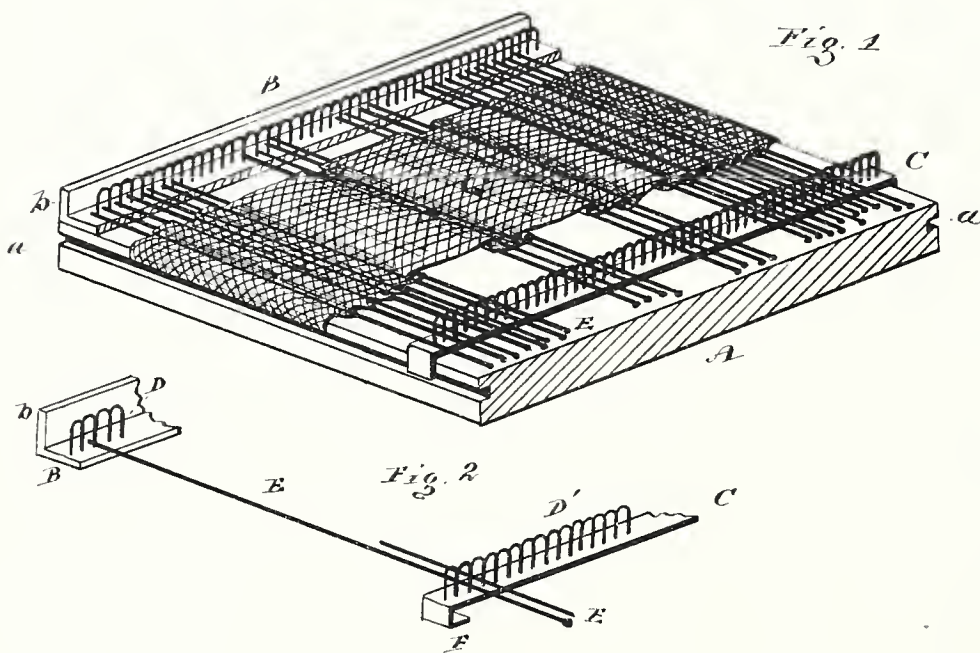
J. SNOWDEN BELL,

W. H. ROWE.

LIZZIE J. BOYD.
PLAITING MACHINE.

No. 182,636.

Patented Sept. 26, 1876.



WITNESSES:
Samuel S. Wood
N. E. Wood

INVENTOR
Lizzie J. Boyd

UNITED STATES PATENT OFFICE.

LIZZIE J. BOYD, OF COATESVILLE, PENNSYLVANIA.

IMPROVEMENT IN PLAITING-MACHINES.

Specification forming part of Letters Patent No. **182,636**, dated September 26, 1876; application filed March 15, 1876.

To all whom it may concern:

Be it known that I, LIZZIE J. BOYD, of Coatesville, in the county of Chester and the State of Pennsylvania, have invented certain Improvements in Machines for Plaiting Fibrous Materials, of which the following is a specification:

The nature of my improvement consists in the arrangement of two series of wire-loops, firmly secured to metallic plates, one of which series is affixed along one edge of a smooth board or table. The other series is on a shifting or adjustable plate, held in side grooves, made in opposite edges of said table, and is parallel to the fixed series. Round wires are passed through the folds of textile fabrics, their ends held in place by the said series of loops, for the purpose of plaiting the fabric, which is pressed with a hot smoothing-iron while on the board or table, as a foundation.

The accompanying drawing, with the letters of reference marked thereon, and a brief explanation, will enable those skilled in the art to make and use my invention.

Figure 1 is a perspective view of the table and two series of loops, with the needles and fabric in place. Fig. 2 is a detached portion of the two series of loops on their respective plates.

This board or table A may be hinged or otherwise attached to the table of sewing-machines. The table A, of any desired length and width, made smooth on top, has two opposite edges grooved, as shown by *a*. A plate, B, with a vertical flange, *b*, to confine the ends of the needles on one side, is firmly attached to the top along the rear edge of said table A. A series of wire loops, D, as close together as desirable, extending from one end of said plate to the other, constitutes the fixed series of loops. The plate C has each end bent down

and in at right angles at F, so as to slide back and forth in the side grooves in the table, to adjust the same on the table, with its series of wire loops D', affixed to said plate. Stout round wires E, or knitting-needles, of any desired number, are employed in combination with the wire loops. The fabric to be plaited is passed around these needles, by which various plaits are easily made—such as knife-blade plaits, single or double box-plaits, or side plaits of any desired width—and ironed down, and, if need be, basted, on the same board or table, as a foundation.

I am aware of Patent No. 173,674, of February 15, 1876, for a plaiting-frame having fixed pins and adjustable slats or tines, with elongated openings. Such an arrangement I do not use nor claim. My adjustment is made by means of the series of loops on a sliding or shifting plate. The solid board or table constitutes an ironing-board, and is far more advantageous than an open frame, as is also my mode of adjustment, and the use of loops and needles, as a combination of parts.

I do not claim a plaiting-machine consisting of a bed-plate having two rows of staples and on one side an upright flange, in combination with plaiting strips or needles, which are held in the staples, and whose ends abut against said upright flange, as these are not of my invention; but

What I claim as my invention in plaiting-machines is—

The combination of the shifting loop-plate C and the flanged fixed loop-plate B and table A, arranged to operate substantially in the manner and for the purpose specified.

LIZZIE J. BOYD.

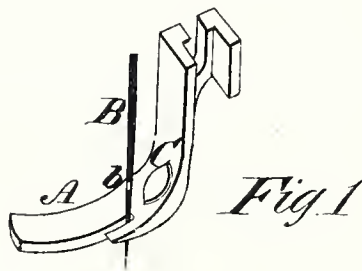
Witnesses:

SAMUEL S. WOOD,
M. E. WOOD.

JULIA FOSTER.
NEEDLE THREADING DEVICE.

No. 182,572.

Patented Sept. 26, 1876.



Witnesses .
Jos. P. Connolly
Anthony A. Connolly

Inventor
Julia Foster
Connolly Bros Attorneys

UNITED STATES PATENT OFFICE.

JULIA FOSTER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN NEEDLE-THREADING DEVICES.

Specification forming part of Letters Patent No. **182,572**, dated September 26, 1876; application filed March 14, 1876.

To all whom it may concern:

Be it known that I, Mrs. JULIA FOSTER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Needle-Threading Device for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 shows my invention as applied to the presser-foot of a sewing-machine.

The object of my invention is to provide a permanent attachment or fixture for sewing-machines which will facilitate the operation of threading the needle, by enabling the eye of the latter to be more easily seen than at present by persons having impaired vision.

My invention consists, essentially, in affixing to the presser or other foot of the machine, or to any other part of the machine occupying an equivalent position with reference to the eye of the needle, a piece of material of different color than that of the needle, so that said color will show through the eye of the latter when looked for, and thus facilitate the insertion of the thread.

In carrying my invention into practical effect, I affix to the presser or other foot a small piece of copper, enameled on its outer or exposed side, so as to present a white surface to view, which will be readily seen through the eye of the needle, and whereby the threading operation will be rendered more certain and easy than at present.

In the accompanying drawing, A designates a presser or other foot of a sewing-machine of any construction, to which this improvement is or may be applicable. B is the needle, having the usual eye at *b*. C is a small piece of

copper, having its exposed side enameled, so as to show a white surface, affixed permanently to the foot A, in such position that when looking at or through the eye *b* said white surface will be seen.

I do not wish to be understood as claiming, broadly, any needle-threading attachment to sewing-machines. I am aware that devices having in view the same object as mine—that is, the illumination or clear indication of the position of the eye of the needle—have been used. Devices of this character have been described in English Patents Nos. 120 and 2,567, of 1872. My invention differs from these particularly in points of simplicity, cheapness, and convenience, the reflector being simply a minute speck of white enamel, embedded in, and integral with, the presser-foot, with neither the size nor arrangement of which it interferes, and not projecting beyond the sides of the presser-foot. From its nature, the reflector, which I claim as my invention, may be used with any kind of a presser-foot, whether the same be a combined hemmer and presser-foot or other device, differing in this respect from any detachable spoon-shaped or otherwise formed reflector.

What I claim as my invention is—

A presser-foot for sewing-machines, formed with a device for indicating the position of the eye of the needle, said device consisting of a light spot or plate, backed by, and integral with, said foot, but distinct in appearance therefrom, as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of March, 1876.

MRS. JULIA FOSTER.

Witnesses:

M. DANL. CONNOLLY,
CHAS. F. VAN HORN.

E. HOLT.
Packing for Piston-Rods, &c.

No. 196,119.

Patented Oct. 16, 1877.

Fig. 1.

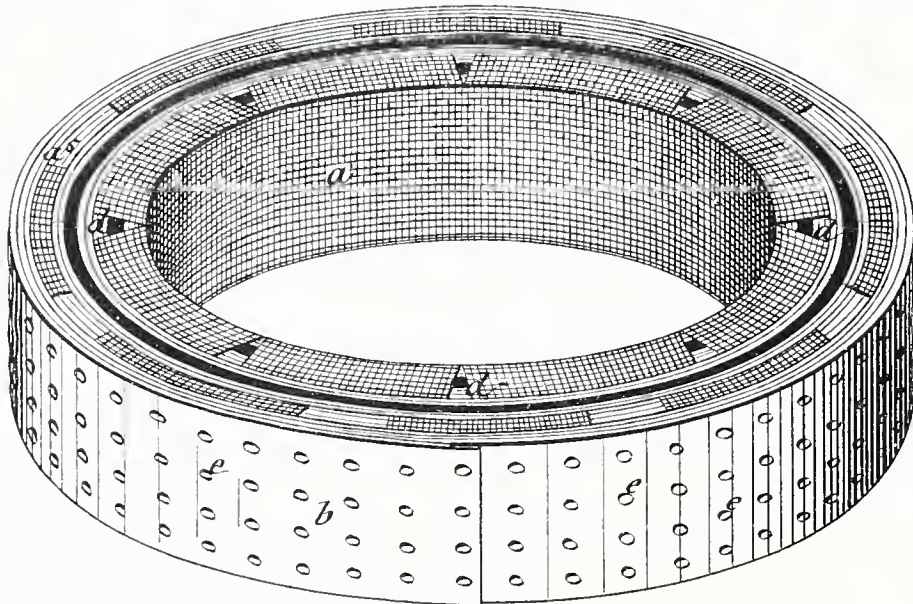
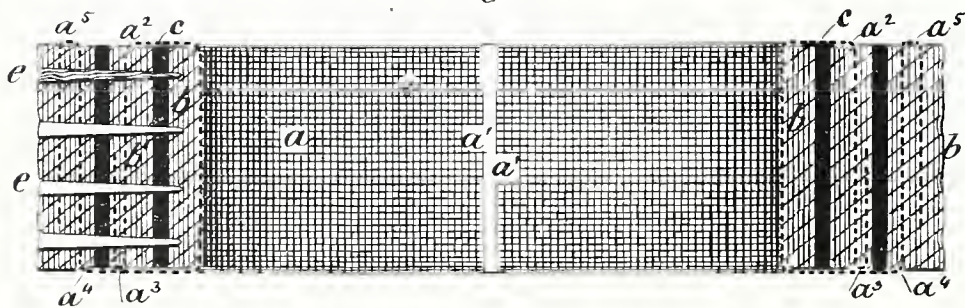


Fig. 2.



Attest:
A. J. Hood
D. P. Cowl

Inventor:
Elizabeth Holt,
by *E. E. Masson*
att'y

UNITED STATES PATENT OFFICE.

ELIZABETH HOLT, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN PACKINGS FOR PISTON-RODS, &c.

Specification forming part of Letters Patent No. **196,119**, dated October 16, 1877; application filed April 5, 1877.

To all whom it may concern:

Be it known that I, ELIZABETH HOLT, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Packings for Piston-Rods, &c.; and that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of a packing-ring embodying my invention. Fig. 2 represents a vertical section of the same.

My invention relates to packing-rings to be used in the stuffing-boxes of piston and pump rods, &c., in which the material used is mainly hemp or cotton woven into a strip and wound into a ring, with an inside lining or protecting-band of metal.

Packing made of fibrous material is generally preferred for its property of retaining the lubricating material and distributing it evenly upon the rod through which it passes. At the same time it is elastic and easily compressed, so as to form a tight packing; but the difficulty is to lay or coil it uniformly within the stuffing-box.

To simplify the operation the fibrous material has been woven and formed into a coil, uniform in thickness, and used in that condition or inclosed in wire-gauze, or even sewed or pegged together, so that the arrangement of the coils forming the ring may not be disturbed while the ring is cut to place it around the rod. But the same elasticity that renders packing of fibrous material superior to others makes it very difficult to introduce the packing-ring into the stuffing-box after it has once been cut, and forces many manufacturers to use metallic packing, although more injurious to the frictional parts, or more expensive.

The object of my invention is to produce a packing that will combine the elasticity and other qualities of fibrous material with the advantages of metal packing—*i. e.*, to retain its form permanently while the ring is cut vertically, so that it can be introduced in the stuffing-box without any difficulty or disarrangement of the parts of which the packing is composed.

My invention consists in forming a packing-

ring of a series of coils of woven fibrous material and india-rubber, retained permanently in relation to each other by means of wire-gauze folded a number of times within the body of the fibrous material, mainly toward its periphery, to retain the parts in their normal position while the packing is placed in the stuffing-box, as will be hereinafter described.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

My improved packing is generally formed in the shape of rings upon a mandrel of the same size as the rods around which it is to be used. For this purpose a sheet of wire-gauze, *a*, of the required size is first placed upon said mandrel, so that two of its edges will nearly meet, as at *a*¹, and the other two edges extend beyond the proposed height of the packing-ring. A strip or tape, *b*, of woven fibrous material—as hemp or cotton—is then wound tightly around the wire-gauze, and a band of india-rubber, *c*, is then interposed to add to the elasticity of the packing, and around it is wrapped an additional length of the strip, as at *b*¹. The wire-gauze is then split at *d*, so that it can be folded over the strip already wound, as shown at *a*², and where it is retained by a couple of additional coils of the fibrous material, upon which the edge of the wire-gauze is then folded, as at *a*³, this edge being retained within the packing by another coil or coils of the strip *b*. A second band of india-rubber is then added, and retained in place by a few coils of the woven strip. The opposite edge of the wire-gauze is then operated upon in the same manner, being first split, as at *d*, and folded over, as at *a*⁴, and retained in that position by continuing to wind the long woven strip a few turns. The edge of the metallic gauze is at last folded over, as at *a*⁵, and a few more coils of the woven strip placed tightly around it. All the metallic folds of wire-gauze are then permanently and securely united to each other and to the fibrous strip by a series of pegs, *e*, driven through them, so that the ring can be cut vertically, (in a number of pieces, if desired,) and introduced in a stuffing-box with the same facility as metallic packing.

It is evident that the number of folds of the wire-gauze within the woven fibrous material

may vary somewhat according to the size of the packing, and that one of the rubber bands may be dispensed with, or more added, without departing from the spirit of my invention.

Having now described my invention, what I claim is—

The packing-ring composed of a series of coils of woven fibrous material and india-rubber, retained permanently in relation to each

other by means of a sheet of wire-gauze, having two of its edges folded within the body of the fibrous material, substantially in the manner and for the purpose described.

ELIZABETH HOLT.

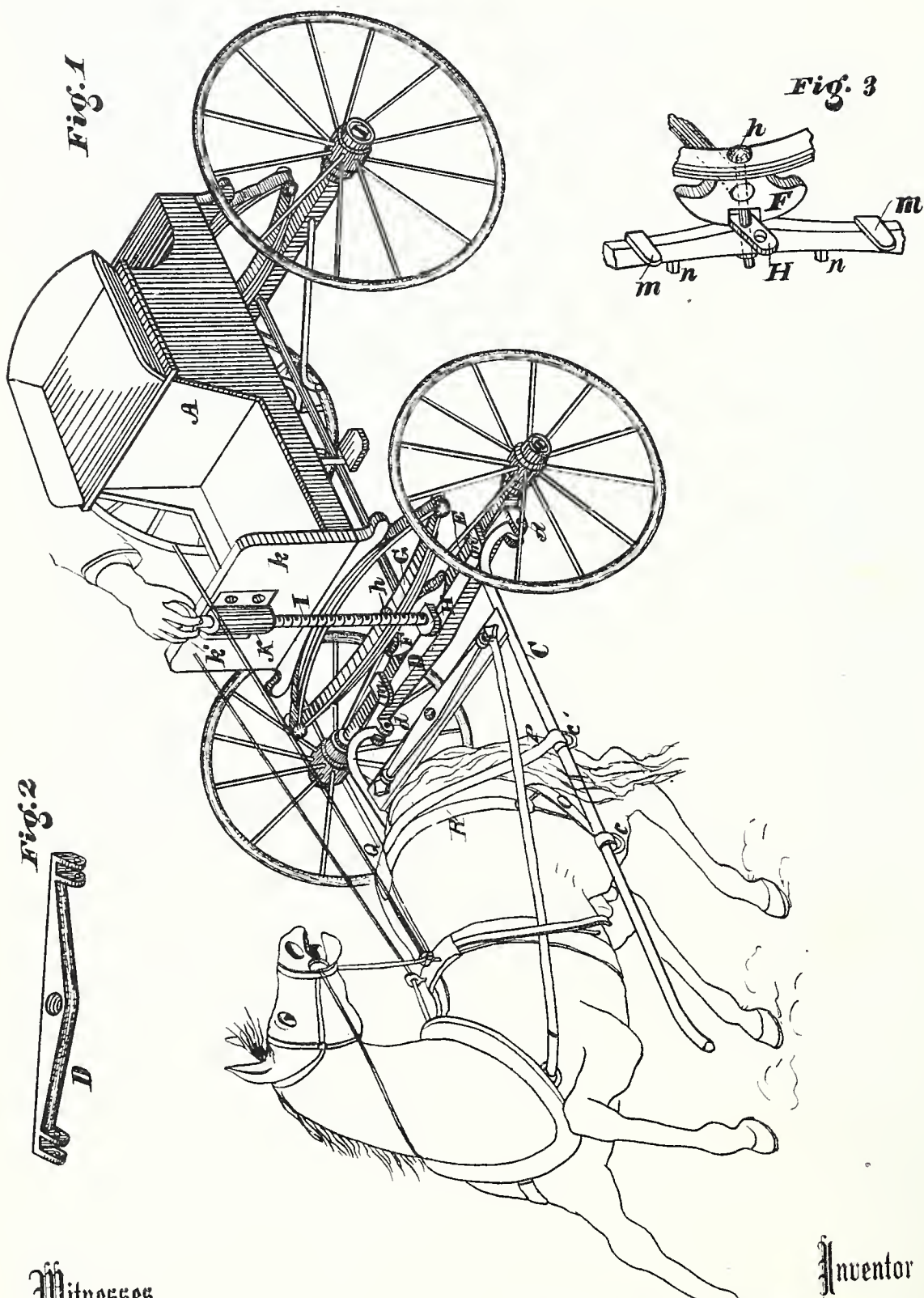
Witnesses:

WEST McMURRAY,
J. H. SWETT.

L. F. SLEEPER.
DETACHING HORSES.

No. 188,426.

Patented March 13, 1877.



Witnesses
Saml J. Van Favour.
Jos. B. Connolly.

Inventor
Louisa H. Sleeper,
Connolly Bros; Attorneys

UNITED STATES PATENT OFFICE.

LOUISA F. SLEEPER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF HER RIGHT TO CHARLES B. RITTER, OF SAME PLACE.

IMPROVEMENT IN DETACHING HORSES.

Specification forming part of Letters Patent No. **188,426**, dated March 13, 1877; application filed
November 27, 1876.

To all whom it may concern:

Be it known that I, LOUISA F. SLEEPER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Apparatus for Detaching Horses from Vehicles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective of my invention. Figs. 2 and 3 are detail perspectives.

My invention has for its object to provide means for readily detaching a runaway horse from the vehicle to which he is hitched, so as to avoid injury or accident to said vehicle, or the occupants thereof.

The nature of my invention consists, first, in connecting the shafts to the axle-tree by means of a screw-rod secured to the dash-board or equivalent part of the vehicle, in such manner that it shall be within easy reach of the occupant of said vehicle, so that when the horse "runs off" the shafts may be disconnected from the axle-tree by unscrewing said rod; secondly, in certain details of construction hereinafter more fully set forth.

Referring to the accompanying drawing, A designates a buggy or other vehicle, of the usual or any suitable construction; and B, a fiery steed hitched thereto. The shafts of the vehicle are shown at C, terminating in a cross-bar, D, secured to said shafts by bolts *d d*, forming a pivotal connection. E is the front axle of the vehicle, and F the bolster, on which rests the spring G. H is a bar or plate, pivoted by means of the bolt *h*, which passes through said spring between the bolster and axle. I is a threaded rod, held in a vertical position in the nut K, which is secured to the dash-board *k* of the vehicle, said rod terminating in a hand-wheel, *k'*. Said rod passes through the nut K, bar H, and cross-bar D, the passages in the nut and bar being threaded, while that in the plate is smooth. *m m* show two horizontal lugs, secured to the axle E, and designed to

prevent the cross-bar D from rising above said axle, and *n n* are two vertical hangers on said axle, the object of which is to prevent said cross-bar D from getting beneath the axle, as also to avoid bending the rod I when the spring G "gives" under the weight of the occupants or the jolting of the vehicle. *c c* show the staples through which the customary breech-band straps O pass, and *c'* are similar devices, located some distance in the rear of said breech-band staples, to form means for securely connecting straps P P to the shafts C. Said straps P P proceed downwardly from the back-strap Q in the rear of the hip-straps R R, and are passed through the staples *c'*, and fastened in the manner in which breech-band straps usually are—namely, by buckling. They should be secured to the back-strap in any appropriate manner, as by stitching to a ring.

The operation is obvious. When the steed runs away, the occupant of the vehicle merely turns the rod I, unscrewing the same from the cross-bar D, thus permitting the shafts to be carried off, while the vehicle comes to a state of rest. The shafts, though detached, do not fall down upon the horse's heels, being prevented from doing so by the straps P P.

The object of the plate H is not only to form a means of connection between the axle E and cross-bar D, but also to permit said axle to readily swing around in turning the vehicle without bending the rod I out of place. The center of motion of said axle being the bolt *h*, it is obvious that if said plate were not pivoted, the movement of the axle would bend the rod I and render the apparatus impracticable and inoperative.

I have described and shown certain means for preventing the dropping of the shafts when the latter are separated from the vehicle; but as I am about to make these the subject of a separate application, I disclaim them here.

What I claim as my invention is—

1. The screw-rod I, secured by means of a nut, K, on the front of a vehicle, and serving to connect the shafts to the axle-tree through the medium of the cross-bar D and pivoted

plate H, substantially as shown and described.

2. In combination with the pivoted cross-bar D, axle E, and screw-rod I, the pivoted plate H, substantially as and for the purposes set forth.

3. The lugs *m m*, secured to the axle E, for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of November, 1876.

MRS. LOUISA F. SLEEPER.

Witnesses:

M. DANL. CONNOLLY,
CHAS. F. VAN HORN.

E. W. SMITH.

BOOK CARRIERS AND HOLDERS.

No. 188,199.

Patented March 6, 1877.

Fig. 1.

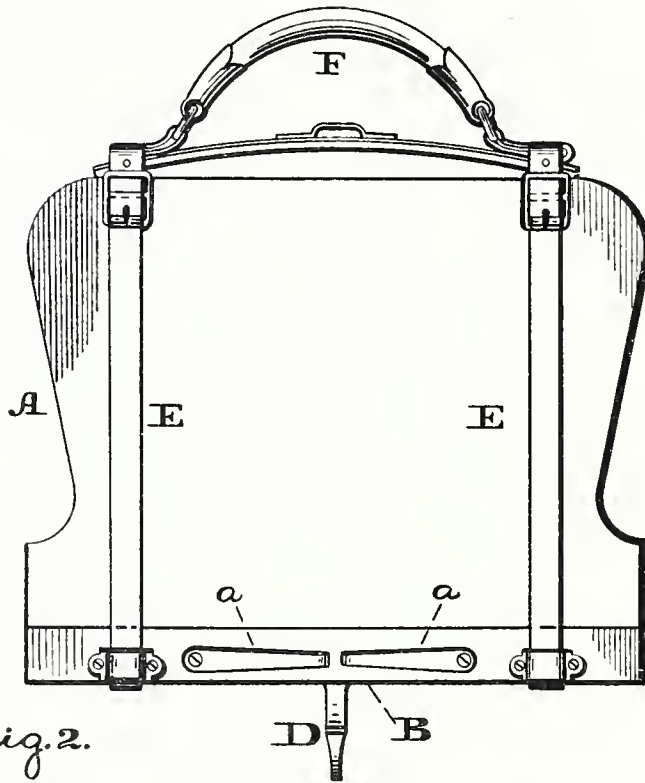


Fig. 2.

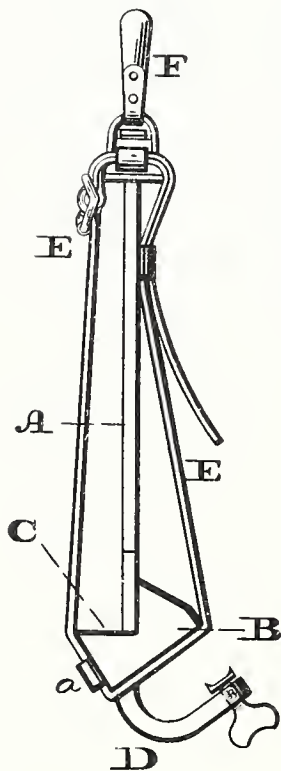
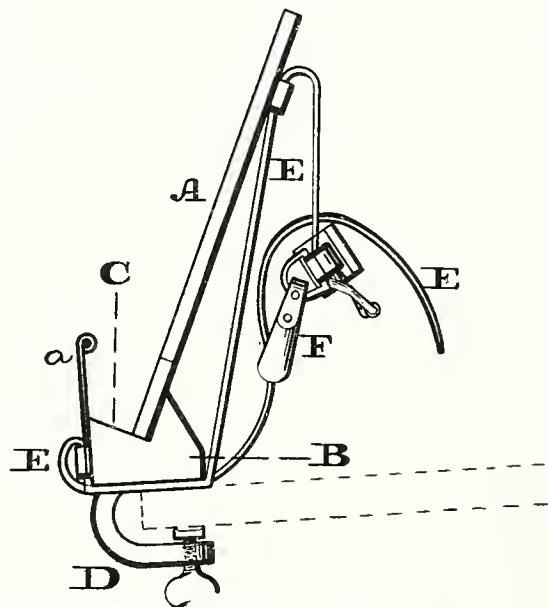


Fig. 3.



Witnesses:
Levi F. Brown
Do. P. Grant.

Inventor:
Elizabeth W. Smith,
 by *John A. Diederichsen*
 Attorney.

UNITED STATES PATENT OFFICE.

ELIZABETH W. SMITH, OF PHILADELPHIA, ASSIGNOR TO DANIEL SUTTER,
OF SAME PLACE, AND ARTHUR MILLER, OF MOORESTOWN, PA.

IMPROVEMENT IN BOOK CARRIERS AND HOLDERS.

Specification forming part of Letters Patent No. **188,199**, dated March 6, 1877; application filed
November 3, 1876.

To all whom it may concern :

Be it known that I, ELIZABETH W. SMITH, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in a Combined Book Carrier and Holder; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a front view of the device embodying my invention. Figs. 2 and 3 are side views thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a combined book carrier and holder, either member of which may be brought into service, so that books may be conveniently carried and the device afterward clamped to a desk, table, or otherwise, for holding or supporting the books while open.

Referring to the drawings, A represents a book-holder, consisting of a board or plate to whose lower end is secured a base, B, which projects in front thereof, so as to leave a ledge, C. To the under side of the base there is connected a curved arm, through which is fitted a screw, the two forming a clamp, D, for securing the holder A to a desk, table, or other place of application.

E represents two or more straps, which are connected to the holder or its base and passed around the same. Buckles are secured to the end of each strap, so that the other end thereof may be connected thereto, whereby books, &c., may be clamped or secured by the straps, after the manner of book-carriers at present in use. A handle, F, is attached to the strap at what will be the top of the device, so that the holder A, the straps E, and the applied articles may be conveniently carried.

It will be seen that the board or plate of the holder will act as a support for the books or

other articles clamped or strapped there-against, and the ledge C of the base will prevent downward displacement of said books or articles.

When the device is to be used as a holder, the straps will be unbuckled and thrown to the rear, and the clamp D fitted to the desk, table, or other place of application, and secured thereto by tightening the screw of the clamp, the clamp being so located or shaped that the board or plate of the holder A will set rearward or in an angular position, as shown in Fig. 3.

It is evident that a spring-clamp may be employed in lieu of the screw-clamp; and while, in many respects, said spring-clamp is more convenient, the operation will be the same as has been stated.

A book may now be placed on the ledge C and rested against the board or plate of the holder, and if the book is to be held opened, fingers *a*, hinged to base B, may be thrown up, so as to prevent closing of the leaves.

When the books are again to be carried, release the screw of the clamp, arrange the books on the holder, pass the straps around the books and buckle the same, and grasp the handle F, all parts being in their normal position, and the carrier, as such, is restored.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combined book carrier and holder, the same consisting of the board A, with base B and projecting ledge C, in combination with the holding-straps E, passing around the board, and connected at top by the carrying-handle F, substantially as and for the purpose set forth.

2. The holder A B, with clamp D and straps E, substantially as and for the purpose set forth.

ELIZABETH W. SMITH.

Witnesses:

JOHN A. WIEDERSHEIM,
J. W. HAMPTON, Jr.



EMMA S. REED.

CORSET.

No. 186,917.

Patented Jan. 30. 1877.

Fig. 1.

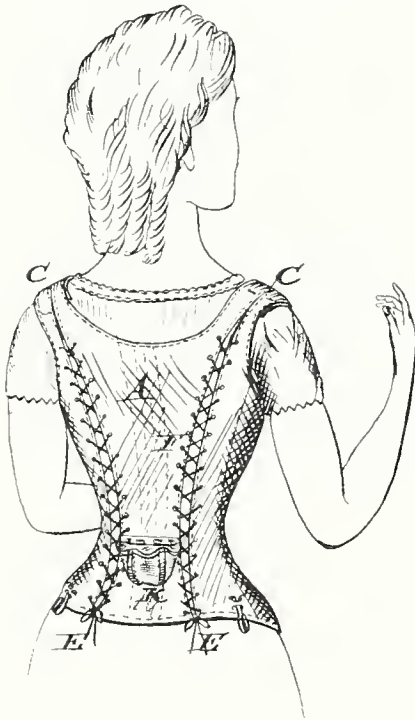


Fig. 3.

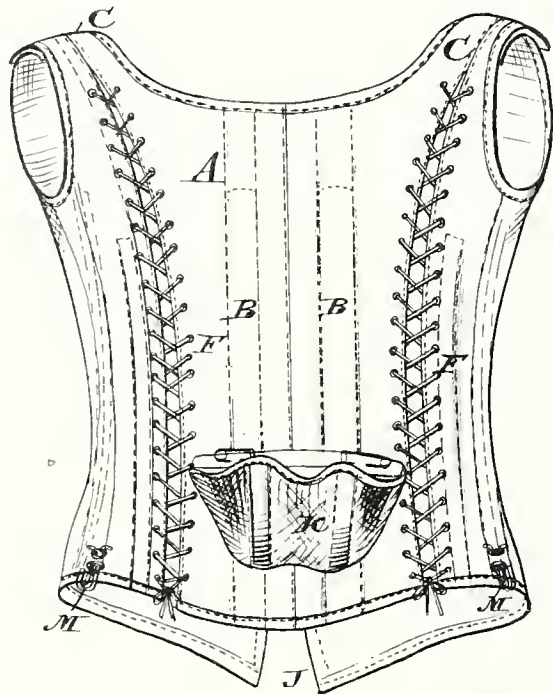


Fig. 2.

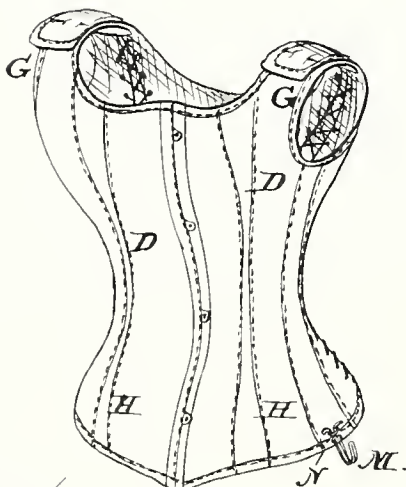


Fig. 5.

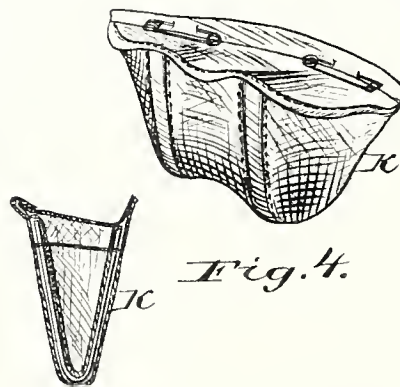


Fig. 4.

Emma S. Reed.
Inventor.

Attest:
H. L. Perrine
A. H. Norris

By James L. Norris.
Attorney.

UNITED STATES PATENT OFFICE

EMMA SIVELLY REED, OF SCRANTON, PENNSYLVANIA.

IMPROVEMENT IN CORSETS.

Specification forming part of Letters Patent No. **186,917**, dated January 30, 1877; application filed January 23, 1877.

To all whom it may concern:

Be it known that I, EMMA SIVELLY REED, of Scranton, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Corsets, of which the following is a specification:

This invention relates to certain improvements in the manufacture of corsets, its object being to provide a corset which may be readily adjusted to fit differently sized and formed persons, and which will also form a convenient support for the lower portions of the under-clothing, and suspend the weight of the same mainly from the shoulders of the wearer; and to this end consists in constructing the corset in the form of a low-necked body, with divisions extending from the shoulder down each side of the back to its lower edge, the parts being united by means of a lacing, so that they can be adjusted to or from each other at will, to adapt the corset to forms of different sizes and shapes. The back and front shoulder-pieces are separated, but are made of sufficient length to overlap each other under all circumstances, in order that the shoulders of the corset may be adjusted to fit any sized person, after which said shoulder-pieces may be secured together in any convenient manner.

My invention further consists of an improved skirt-support, in combination with the back of the corset, and which is composed of an inclosed pocket or pouch of suitable fabric, provided with two bent springs to keep it distended, and capable of being either permanently or temporarily attached to the corset in any convenient manner.

In the drawings, Figure 1 represents a view of the corset on the wearer. Fig. 2 represents a front view of the corset; Fig. 3, a back view of the same; Fig. 4, detached views of the skirt-support, and Fig. 5 a detached view of the removable hook.

The letter A represents the back of the corset, made to conform to the shape of the back of the wearer, and stiffened by means of two parallel central splints, B B, extending upward from the lower edge nearly to the upper edge of said back portion, so as to fall on each side of the spine of the wearer, and by two lighter splints, which extend up each side of said

back portion along the division-lines which separate it from the front portion. The upper part of said back portion is widened and extended upwardly, forming, with the upper rear part of the front portion of the corset, shoulder-pieces C C. The front portions of the corset are represented by the letters D D, and are so shaped as to extend from each side around under the armpits of the wearer to the front of the breast or body, being permanently secured to or forming part of the back portion A at the shoulder-pieces C C, as before, and separated from a point at said shoulder-pieces to the lower edge of the corset, the parts being secured by means of lacings E E passing through eyelets F at the edges of said parts. The said front pieces are extended upwardly at each side, forming shoulder-pieces G, which pass over the shoulders of the wearer, so as to meet and overlap the shoulder-pieces at the rear of the corset, being separated therefrom, that the corset may be fitted to the shoulders of different-sized persons, after which said pieces may be permanently or otherwise secured together, as may be deemed desirable. It is evident, however, that the said front and rear pieces may be permanently secured together, if found convenient. The said front portion is provided with suitably-shaped pockets or recesses H H and I I, for the reception of splints of whalebone, steel, or other stiffening devices; or the said portions of the corset may be filled with cork, cotton, or other material, as may be found most convenient. The edges of the front of the corset are provided with the usual splints J and fastening devices, by which the corset may be secured around the wearer.

The letter K represents the skirt support, which consists of an inclosed pouch or pocket of any suitable fabric, provided with two V-shaped flat springs to keep it distended. Said devices may be secured to the lower part of the back portion of the corset, either permanently or removably—preferably so as to be removed, however, in order to allow the corset to be conveniently washed, in which case it is secured by means of suitable connecting or fastening devices.

The letter M represents a removable hook, to which the strings for supporting the stock-

ings or lower under-clothing of the wearer are secured. Said hook, in the present instance, consists of a bent wire, with free upper ends turned in opposite directions, the portion directly below said bent ends being bent outwardly, forming a spring-shank, which may be sprung into the eyelet N at the lower edge of each side, the bent ends holding the hook in one direction, and the enlarged portion in the opposite direction, so as to prevent the hook from being accidentally removed.

It will be perceived that the front and back portions of my improved corset are entirely separated, except at a point falling directly upon the shoulders of the wearer, and as said separated portions are provided with laces they can be adjusted from the hips up to the extremities of the shoulders by simply drawing or loosening the laces, and the corset can be made to neatly conform to the entire body and bust of the wearer, of whatever size or peculiarity of conformation; and as the back and front shoulder-pieces are adjustable relatively to each other, it is evident that those portions at which alone the front and back portions of the corset are joined can equally as well be made to fit persons of different shapes and sizes, which cannot be done, to my knowledge, with any other corset as heretofore constructed.

The skirt and under-clothing supports being made removable allow the corset to be readily and conveniently washed, which is a great advantage.

The corset is bound and ornamented at the edges, as usual, and at the point where the back and front portions meet and join is stitched across or re-enforced in any convenient manner, to prevent the parts from being torn asunder.

One great advantage secured by my improved construction of the corset is the facili-

ty with which the parts may be folded upon each other for packing and transportation, the front pieces, when folded once, being of the same approximate size and shape, and, when folded along the line of lacing upon said back portion, the whole forming a neat and nearly rectangular package, which can be readily put up in a similarly-shaped box. Another advantage of my improved corset arises from the fact that the shoulder-pieces form part of the front and back portions of the corset, and all shoulder-straps and buckles are dispensed with, and material is thus saved.

What I claim, and desire to secure by Letters Patent, is—

1. A corset consisting of a closed back piece, extending at each side over the shoulders and front pieces, united to and forming with said back piece rear shoulder-pieces, the back and front pieces being separated from each other from a point at or near the shoulders to the bottom of the corset, and adjustably connected together by means of lacings, substantially as described.

2. In a corset, the back and front pieces, divided as described, adjustably secured by lacings and united at the shoulders, forming a rear shoulder-piece, in combination with the front shoulder-piece, substantially as described.

3. In combination with a corset, the skirt-support consisting of an inclosed pocket, distended by V-shaped springs, and adapted to be secured to the back of the corset, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

E. S. REED.

Witnesses:

PHILIP F. LARNER,

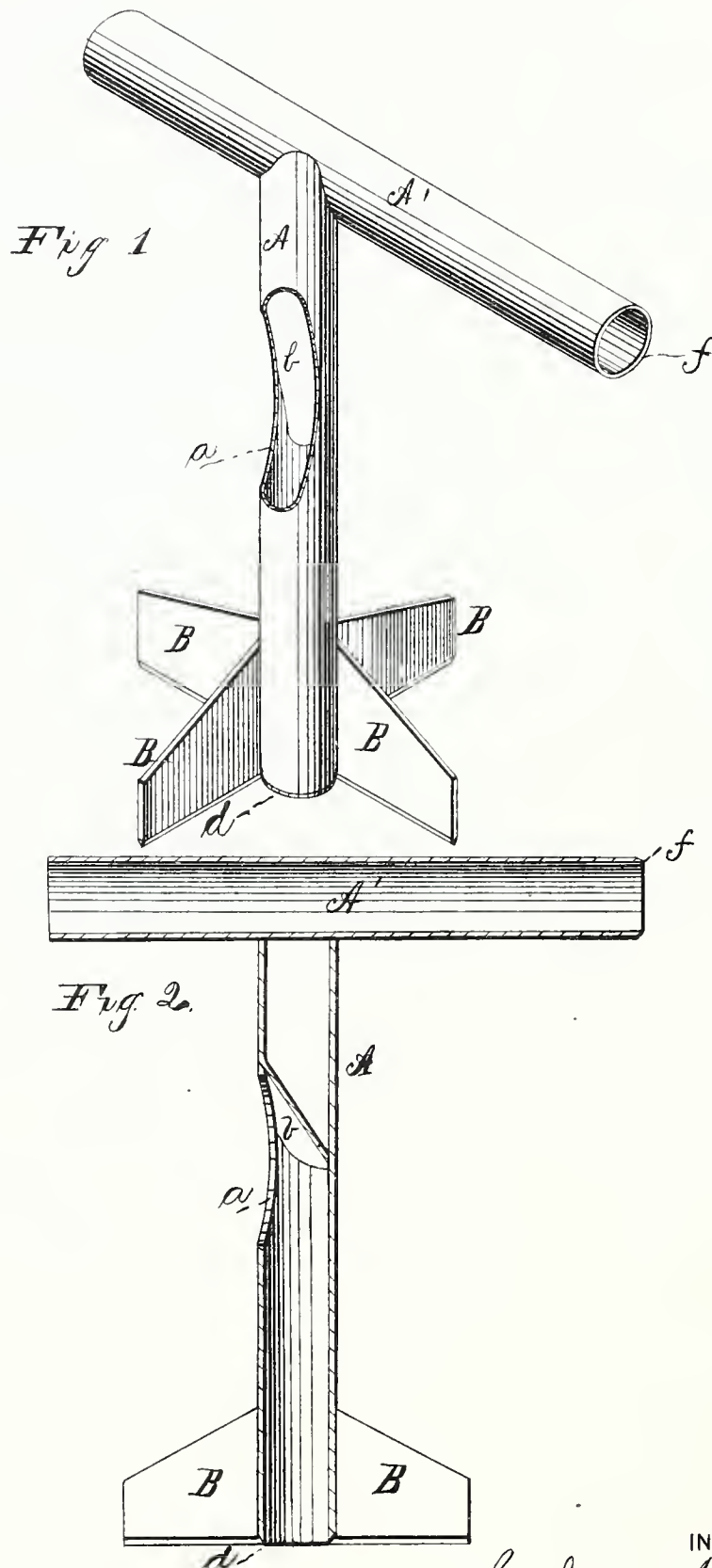
A. H. NORRIS.

S. J. RENNER.

APPLE CORER AND QUARTERER.

No. 188,819.

Patented March 27, 1877.



WITNESSES

Harry, Hubrey, Foulmin
J. L. Curand

INVENTOR

S. Jennie, Renner.

UNITED STATES PATENT OFFICE.

S. JENNIE RENNER, OF PETERSBURG, PENNSYLVANIA.

IMPROVEMENT IN APPLE CORER AND QUARTERER.

Specification forming part of Letters Patent No. **188,819**, dated March 27, 1877; application filed September 9, 1876.

To all whom it may concern:

Be it known that I, S. JENNIE RENNER, of Petersburg, in the county of Huntingdon, and in the State of Pennsylvania, have invented certain new and useful Improvements in Apple Corer and Quarterer; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction of a device for taking the cores out of and cutting apples into quarters, as is hereinafter more fully set forth.

In the accompanying drawings, which form part of this specification, Figure 1 represents a perspective view, and Fig. 2 a sectional view, of my invention.

A represents a vertical metal tube, having its lower end *d* formed with a cutting-edge. Upon one side of the tube is an opening, *a*, above which is an inclined plate, *b*, as shown. Attached to the bottom of the tube A are a series of (four or more) cutting-wings, B B, placed equidistant, and upon the top of said tube is secured another tube, A', attached at right angles to the tube A. The tube A' has also a cutting-edge, *f*, at one end, and is slightly tapered, as shown. This tube is used for taking out apple-cores by forcing the same

down through the center of the apple, so that the core will pass into the tube; and be withdrawn through the open and enlarged end of the same. In coring and quartering the apple at the same time, the tube A' acts as a handle, and by pressing the tube A the cutting-edge at its bottom will core the apple, while the wings B will quarter it at the same time. The core will pass up into the tube, and, striking the incline *b*, will pass out through the side slot *a*. In use, the tube A acts as a handle when the tube A' is coring the apple, and when tube A is cutting and coring the apple, tube A' acts as a handle for the same.

The device is easily and cheaply made, and will perfectly perform its functions.

Having thus fully described my invention, what I claim is—

The combination of the tapering tube A', the tube A, with slot *a*, and wings B, both of said tubes having cutting-edges *f* *d* at their ends, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 24th day of August, 1876.

S. JENNIE RENNER.

Witnesses:

OWEN BRUNER,
JACOB BRUNER.

M. C. HIESTER.
KNEE-PROTECTORS.

No. 194,871.

Patented Sept. 4, 1877.

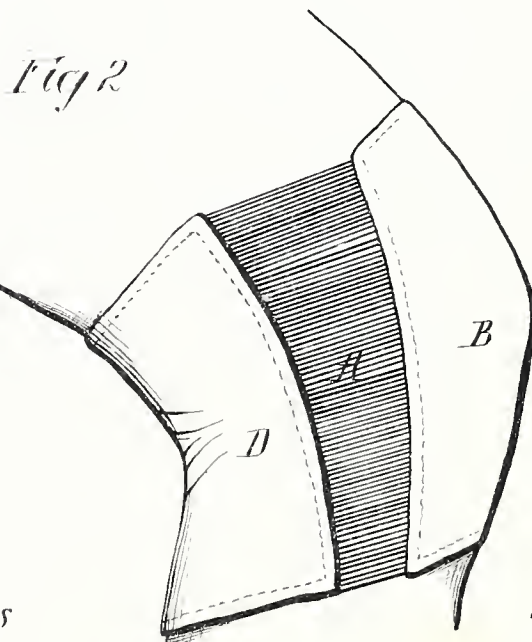
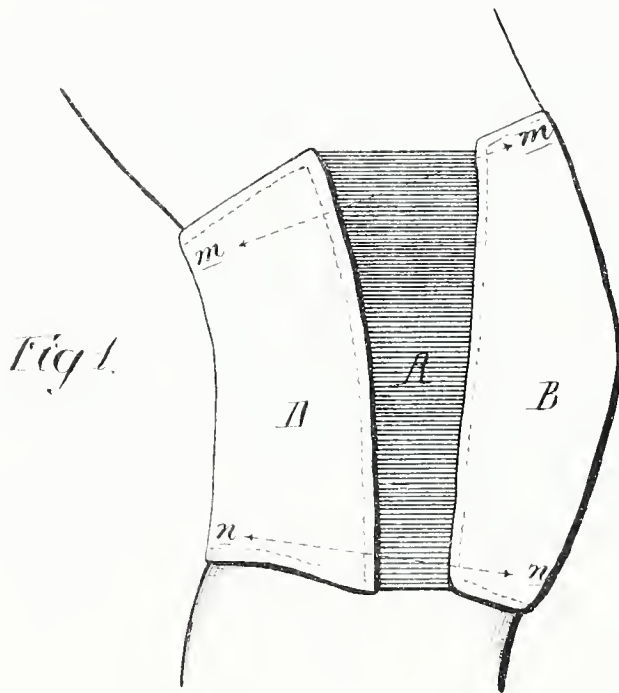
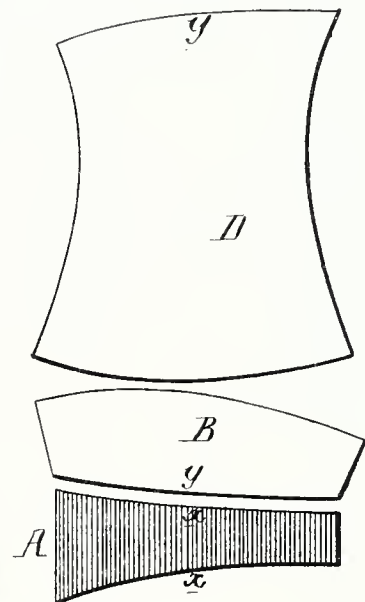


Fig 3.



Witnesses

Henry Lawson &
Henry Smith

Inventor
Mary C. Hiester
by her Attorneys
Horison and m

UNITED STATES PATENT OFFICE.

MARY C. HIESTER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN KNEE-PROTECTORS.

Specification forming part of Letters Patent No. **194,871**, dated September 4, 1877; application filed May 17, 1877.

To all whom it may concern :

Be it known that I, MARY C. HIESTER, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Knee-Protectors, of which the following is a specification :

The object of my invention is to make a protector to be applied to the knee of the child for the preservation of the stocking at that point.

In the drawings, Figures 1 and 2 are side views of the protector, and Fig. 3 a view showing a mode of constructing the same.

In the present instance, the protector consists of three main pieces, namely, the elastic web or gore A, and the two strips B and D, Figs. 3, of silk, woolen, or other suitable fabric.

The adjoining ends of the strips B and D are rounded or otherwise so formed that when stitched together the two strips will present a cavity for the knee-cap.

The elastic web is wider at the upper than at the lower end, so that when the edge *x* of the web is stitched to the edge *y* of the fabric there will be a tubular protector larger in diameter at the line *m m*, where it has to embrace the leg above the knee, than at the line *n n*, where it must embrace the leg below the knee.

The increased width of the elastic web at and near the upper end of the protector also affords increased elasticity at the point where it is most needed, for the upper end of the protector will be subjected to greater distension, when the leg is moved in the act of kneeling, (see Fig. 2,) than the lower portion of the protector.

The web must be of sufficient elasticity throughout to permit the protector to be easily drawn over the foot and calf of the leg, and

should have the property of contracting sufficiently to snugly embrace the leg above and below the knee, for the retention of the protector in its proper position is dependent partly on its clinging to the leg at these points, and partly on the cavity for the knee-cap.

It is not essential in carrying out my invention that the protector should be composed of the precise pieces shown in Fig. 3. It may, for instance, consist of one piece of felt, the cavity for the knee being formed during the process of felting, or it may be made of substantial knitted fabric, with a knee-cavity made during the operation of knitting, or the front portion of the protector may be made of leather with cavity formed by embossing, the rear portion being either of leather or any suitable fabric; but in all cases the protector must be made to contract by means of the elastic gore, and cling to the leg above and below the knee, and must have a cavity for the reception of the knee-cap.

It will be evident that the protector may be made attractive in appearance by different systems of ornamentation.

I claim as my invention—

A knee-protector consisting, mainly, of a tube of non-elastic material with an elastic gore, A, and made to embrace the leg above and below the knee, and having a cavity adapted to the knee-cap, all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARY C. HIESTER.

Witnesses:

HENRY HOWSON, Jr.,
HARRY SMITH.

E. W. STILES.
INKSTANDS.

No. 195,462.

Patented Sept. 25, 1877.

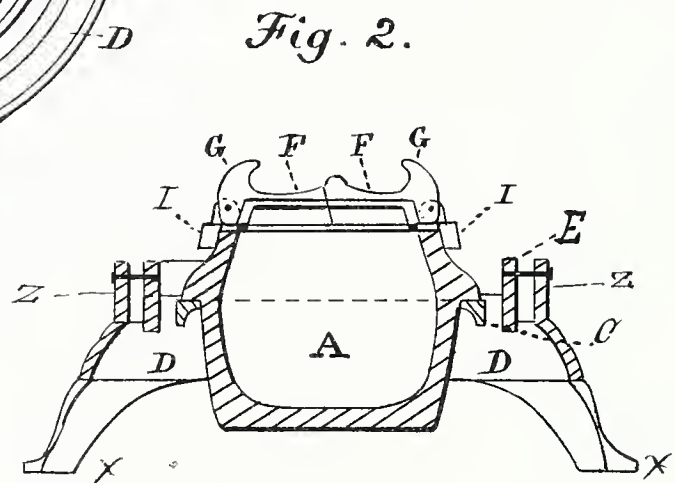
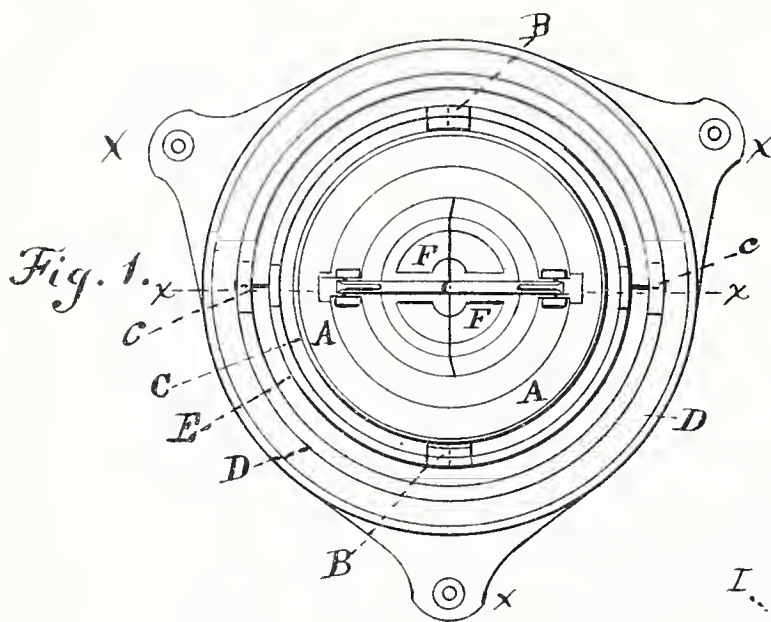


Fig. 4.

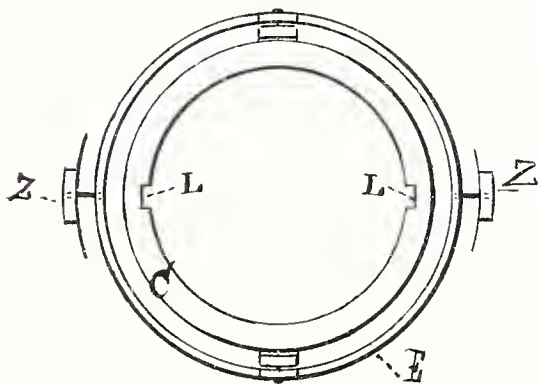
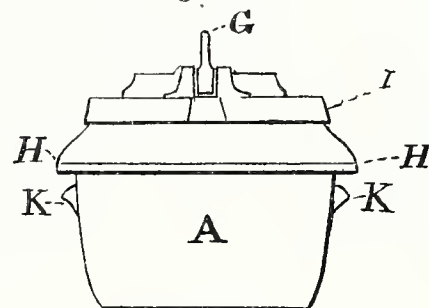


Fig. 3.



Inventor :

Witnesses :

Saml. B. Roane
D. P. Cowl

Mrs. Elizabeth W. Stiles.

UNITED STATES PATENT OFFICE.

ELIZABETH W. STILES, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN INKSTANDS.

Specification forming part of Letters Patent No. **195,462**, dated September 25, 1877; application filed February 27, 1877.

To all whom it may concern:

Be it known that I, ELIZABETH W. STILES, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Suspended Ink-Wells; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a plan view of my invention. Fig. 2 is a vertical section on line *x x* of Fig. 1. Fig. 3 is a side view of the ink-well detached. Fig. 4 is a plan view of the pivoted rings within which the ink-well is placed.

The object of my invention is to suspend an ink-well to a frame or brackets, so that said ink-well shall be kept in constant position, or cork side up, by force of gravity—as, for instance, in the raising of a desk-lid to which the inkstand may be rigidly attached, so that the ink-well maintains a perpendicular position independent of the motion of the object to which the inkstand is attached; also, in the rolling of a ship the constant position of the ink-well is maintained without lateral, oscillatory, or swinging motion.

The device, it is believed, will be especially useful for marine purposes, railway postal-cars, &c., and generally in the construction of desks and secretaries.

In the drawings, Fig. 1, A represents the ink-well, suspended on pivots B B in a metallic ring, C, which operates within another ring, E, to which the said ring C is pivoted at B B. The ring E is supported by the pivots *c c* in the frame D. The pivots are at right angles and equidistant, thereby causing the axes of their revolution to be perpendicular to each other.

In Fig. 2 the seal F F of the ink-well opens from the center on hinges, and its sections are arrested, when poised in proper position, by the projections G G.

In Fig. 3 the flange H rests upon the ring C, (represented in Fig. 4;) and the lugs K K in Fig. 3 are made to slide through the recesses L L in Fig. 4, when a partial revolution of the ink-well to the right or left locks it to the ring C, from which it cannot be released until the said lugs K K are opposite the said recesses L L.

Z Z are ears, and X X are the feet, of the frame D, which are perforated for attachment to a desk or other article.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the hinged seals F F, provided with projections G G, with the band I, substantially as and for the purpose set forth.

2. The combination of a binnacle-balanced fluid-receptacle and of twin seals or covers, pivoted at the periphery of the orifice of the receptacle, and opening outwardly from the center thereof, whereby, when the seals are open, the equilibrium of the receptacle is maintained.

3. As a new article of manufacture, an inkstand consisting of the following elements, to wit, the raised annular ring-frame D, provided with perforated feet X and ears Z, the gimbal mechanism, and the receptacle A, with twin seals or covers F F, substantially as described.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

MRS. ELIZABETH W. STILES.

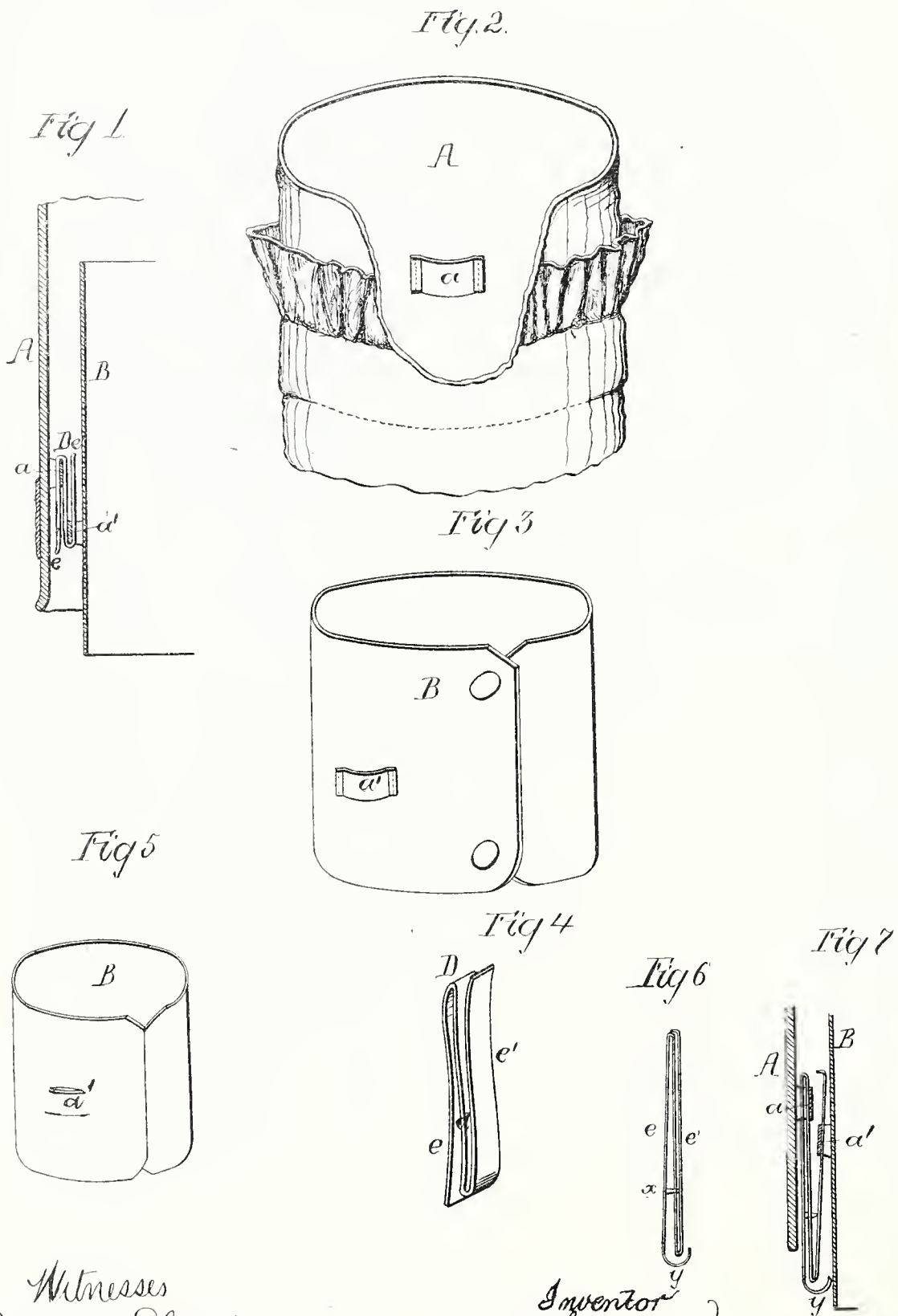
Witnesses:

Mrs. M. A. MAXWELL,
Miss MARY L. SHERMAN.

M. M. WALK.
SLEEVE AND CUFF RETAINERS.

No. 195,678.

Patented Sept. 25, 1877.



Witnesses
Richard L. Gardiner
Henry Smith

Inventor
Martha M. Walk
by her Attorney

UNITED STATES PATENT OFFICE.

MARTHA M. WALK, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SLEEVE AND CUFF RETAINERS.

Specification forming part of Letters Patent No. **195,678**, dated September 25, 1877; application filed July 9, 1877.

To all whom it may concern:

Be it known that I, MARTHA M. WALK, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Attaching Cuffs to Sleeves, of which the following is a specification:

The object of my invention is to so confine a cuff to the sleeve of a coat, frock, or other garment that the descent of the cuff over the hand to an undue extent will be prevented; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a sectional view illustrating my improved cuff-retainer in position; Figs. 2, 3, and 4, perspective views, respectively, of a portion of the sleeve of a dress, of the cuff, and of the retainer; and Figs. 5, 6, and 7, modifications.

A represents the lower portion of the sleeve of a dress, and B a cuff, and to both sleeve and cuff are secured, by sewing or otherwise, loops *a* and *a'* of suitable fabric, that on the sleeve being inside the same, and that on the cuff upon the outside.

D is a spring-clasp, consisting of a central web, *d*, and two spring-arms, *e* and *e'*, one on each side of said central web.

In applying this clasp to the sleeve and the cuff, the loop on the sleeve is slipped between the central portion and the arm *e*, and the loop on the cuff between said central portion and the arm *e'*, the spring-arms serving to press the loops *a* and *a'* against the center of the clasp with sufficient force to prevent any undue movement of the cuff independent of the sleeve.

Figs. 6 and 7 illustrate a modification, in which both loops are confined between the central web *d* and arm *e'*. In this case the arm *e* has a pin, *x*, so that by pressing upon the lower end of said arm the upper end of the arm *e'* may be thrown away from the web *d*, and thus permit the introduction of the loops, as in Fig. 7, the parts resuming their normal position, Fig. 6, as soon as the pressure upon the lower end of the arm *e* is removed. In this case it is advisable to provide the lower end of the arm *e* with a guard, *y*, to prevent the accidental opening of the clasp.

When the pressure of the spring-arms is very strong the central web may be dispensed with, the two spring-arms alone being employed.

It is not necessary that the loops be separate from either sleeve or cuff; for instance, Fig. 5 shows a mode of forming a loop in the material of the cuff itself by making two parallel slits in the same.

I claim as my invention—

A sleeve, A, having the clasp D attached longitudinally on its inner side by a loop, *a*, in combination with the cuff B having the transverse loop *a'*, to which the clasp is adapted, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARTHA M. WALK.

Witnesses:

JAS. W. WALK,
HARRY SMITH.

H. M. CHAPMAN.
Corsets.

No. 198,348.

Patented Dec. 18, 1877.

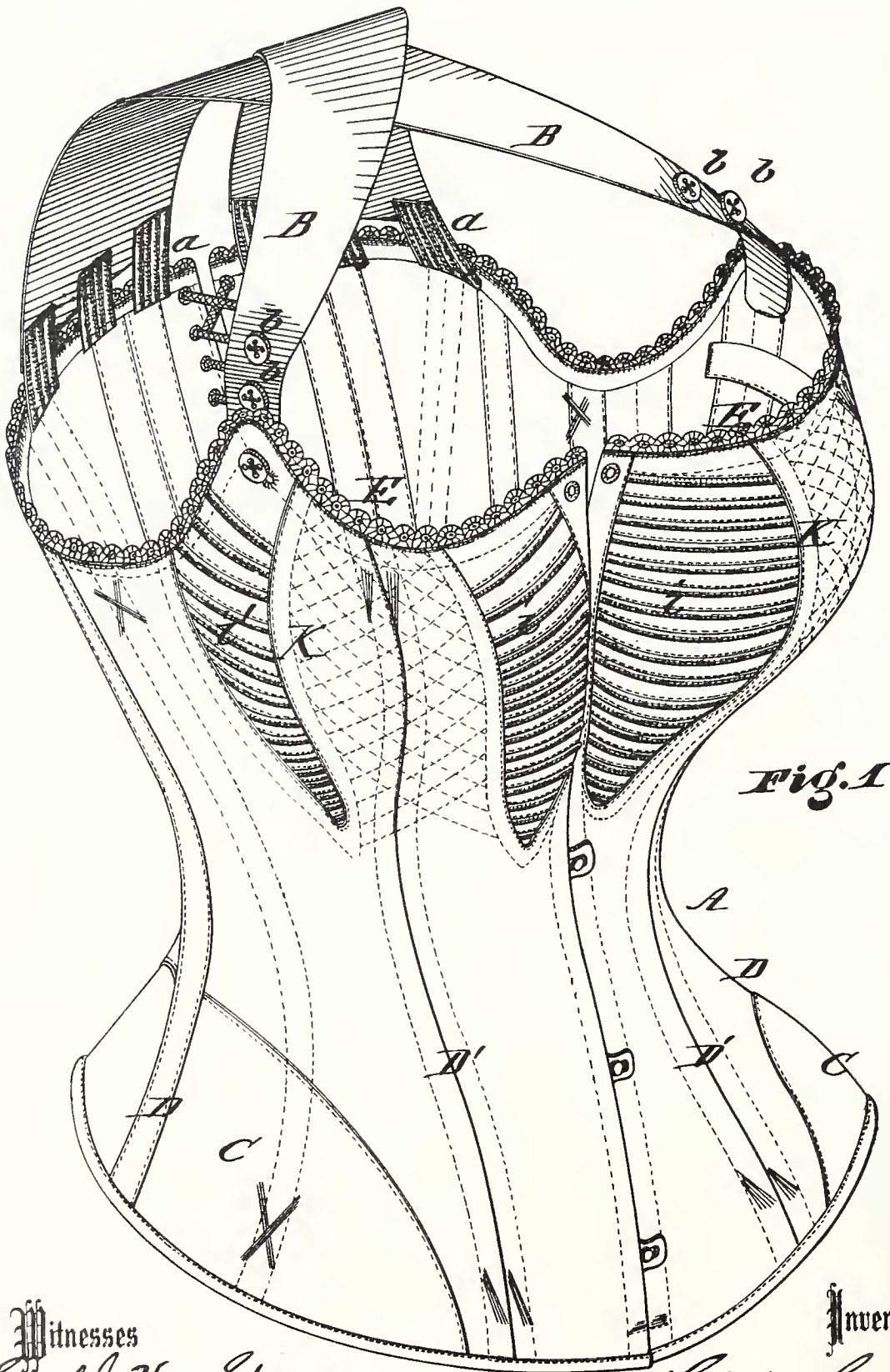


Fig. 1

Witnesses

Saml. J. Van Starore
Jas. B. Connolly

Inventor

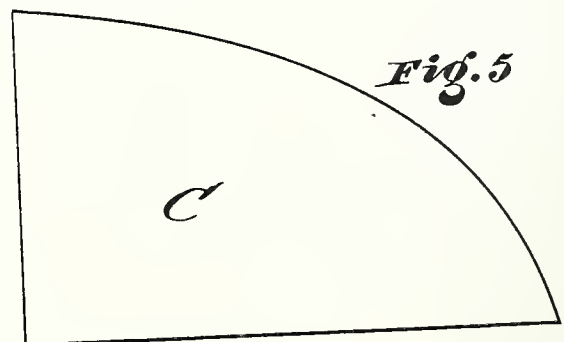
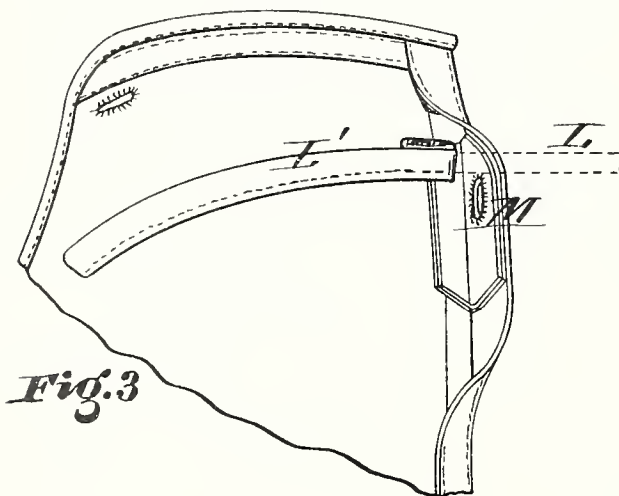
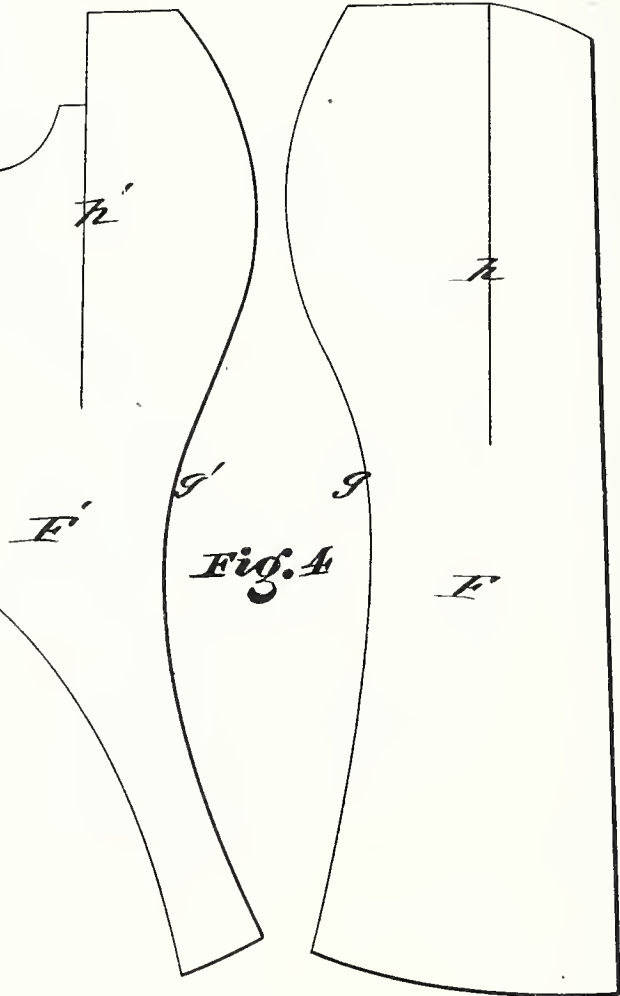
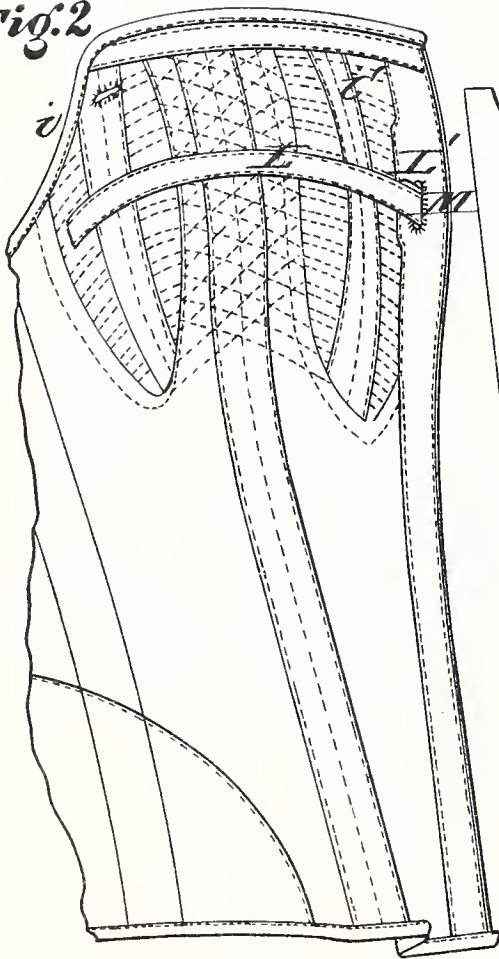
H. M. Chapman
Connolly & Co. Attorneys

H. M. CHAPMAN.
Corsets.

No. 198,348.

Patented Dec. 18, 1877.

Fig. 2



Witnesses

Saml. J. Van Stavern
Jos. R. Connolly

Inventor

H. M. Chapman
Connolly Bros
Attorneys

H. M. CHAPMAN.

Corsets.

No. 198,348.

Patented Dec. 18, 1877.

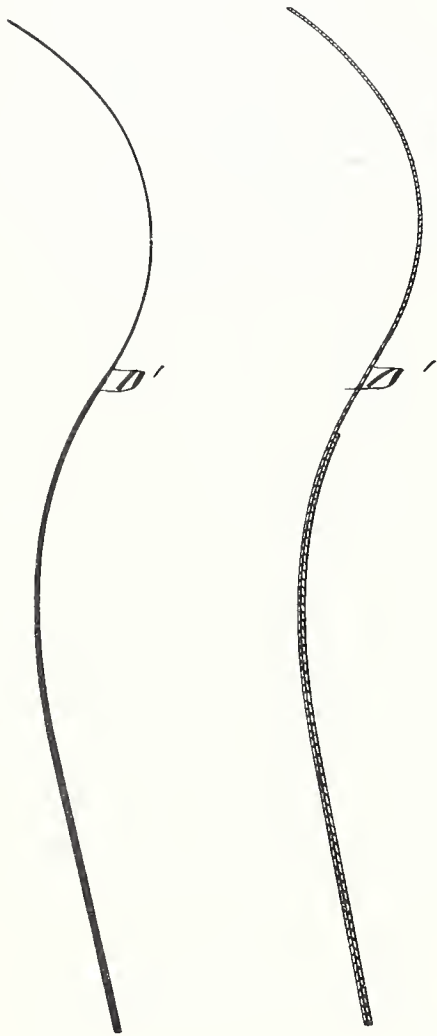


Fig. 6

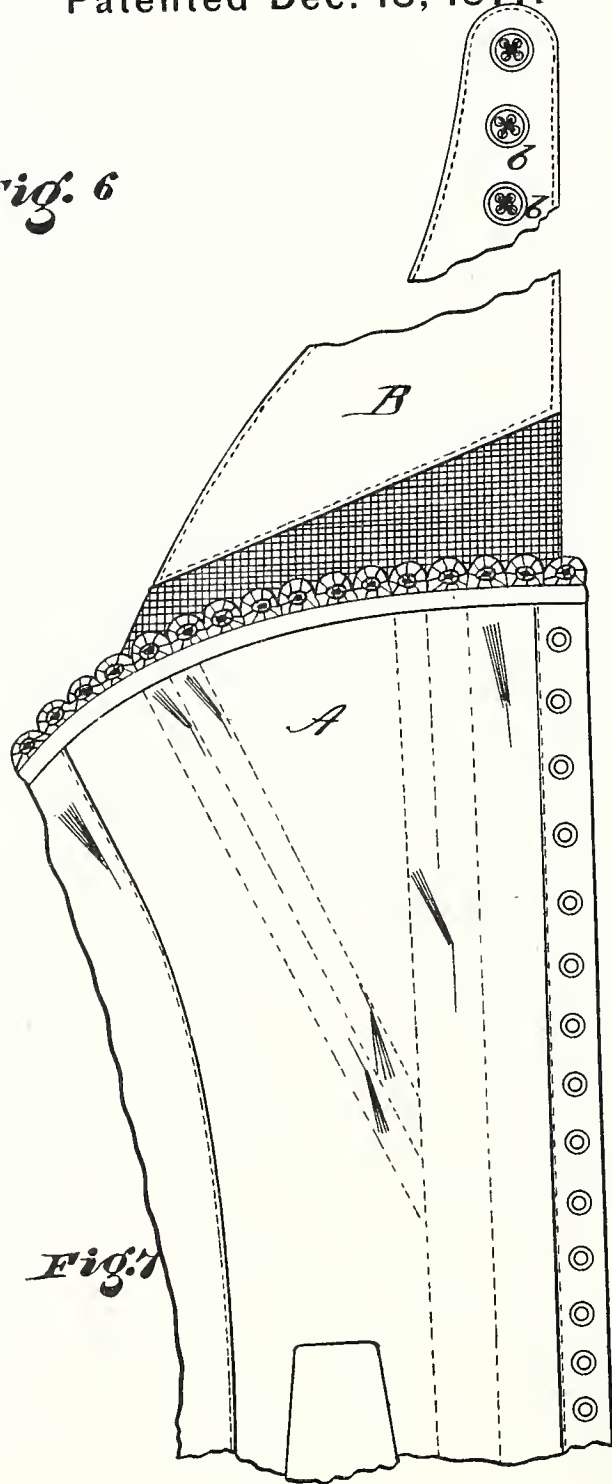


Fig. 7

Witnesses
Sam'l. J. Van Stavoren
Jos. P. Connolly

Inventor
H. M. Chapman
Connolly Bros
Attorneys

UNITED STATES PATENT OFFICE.

HARIET M. CHAPMAN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN CORSETS.

Specification forming part of Letters Patent No. **198,348**, dated December 18, 1877; application filed June 13, 1877.

To all whom it may concern:

Be it known that I, HARIET M. CHAPMAN, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Corsets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective view of my invention; Figs. 2, 3, 6, and 7, detail views; Figs. 4 and 5, plan views of the patterns for bosom-pieces and circular gores.

This invention has relation to certain improvements in corsets, whereby they are rendered more comfortable and serviceable, and made to fit more neatly than those in ordinary use.

These improvements consist, first, in providing the corset with crossed supporting-straps or suspenders, to pass over the shoulders of the wearer; second, in providing the corset with a segmental or curved hip-gore, but extending only from the side bones to the bones coming down from the middle of the puff; third, splitting the bone or bones which extend down through the middle of the puff, so as to leave them very yielding in the puff, or, more broadly, having the puff bone or stay made thinner in than below the puff, as might be accomplished by bracing a thin bone by another below the puff; fourth, making the cross-bone inside the puff removable, so as to adjust the size of bust by means of a bone sliding out of its sheath; fifth, forming the pattern for the middle of the puff in two pieces of peculiar outline, which will give the requisite shape for the contour of the bust, all as hereinafter described.

Referring to the drawings, A designates the corset. B B are the shoulder-straps or suspenders, provided with elastic pieces *a a*, by which they are sewed to the back of the corset, thence crossing, and in front secured by buttons and button-holes above the puffs.

Each strap has several buttons, *b b*, which allow adjustment.

C C are the hip-gores, having their upper edges curved and extending from the side bones D D to the bones D' D', extending downward from the middle of the puffs. By means of this gore a neat and appropriate curvature and swell are given to the hip parts of the corset, and a perfect and comfortable fit obtained.

The bones D' D', which pass through the centers of the puffs E E, are either split at that part extending through the puff, so as to render the latter sufficiently yielding, while a certain degree of stiffness is preserved below, or an equivalent result is obtained by using a thin bone and bracing it below, or adopting any other suitable expedient.

The patterns for the middle of the puffs are made in two pieces, F F', instead of being made of three, as is usual. These, when sewed together at the middle of the puff, give a roundness and projection of remarkable uniformity and neatness. Fig. 4 illustrates these patterns. Pattern F forms one side of the front, while pattern F' forms the side of the corset.

The scroll-curved edges *g g'* are sewed together, and produce a seam through the center of the puff. The straight cuts *h h'* serve to receive the gores *i i'*. Between the gores the connected patterns or pieces F F' have a lateral swell at K, above and below which the outer lines or edges converge, as shown.

L is the cross-bow of the puff, and L' its sheath, open at one end for the removal and adjustment of the bow. M is a pocket, into which the ends of bow and sheath slip when in place.

Having described my invention, I claim—

1. The curved hip-gore C, extending from the side bones D to the center bone D', said gore having its upper edge segmental, its rear or side edge flush and on line with the side seam, and its lower and forward angle meeting the puff-stay D' at lower extremity of latter, as shown and described.

2. The crossed adjustable and elastic sup-

porting-straps B B, diminishing in width from rear to front, connected to the top edge of corset-back by elastic straps *a*, and to the top edge of front by buttons and button-hole adjustable fastening, as described.

3. In combination with a corset puff or puffs, the bones or braces D' D', extending through the centers of the puffs, and made thinner or more yielding at than below the latter.

4. The removable cross-bone L inside the

puff, for the adjustment of the size of the bust, substantially as described.

5. The patterns F F' for the puffs, as shown.

In testimony that I claim the foregoing I have hereunto set my hand.

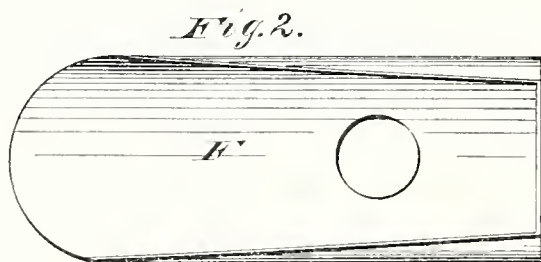
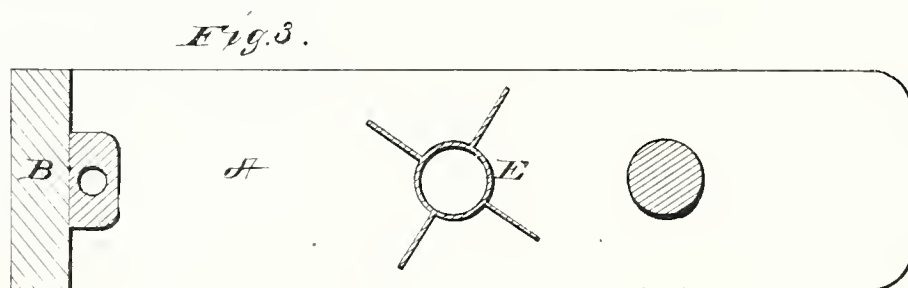
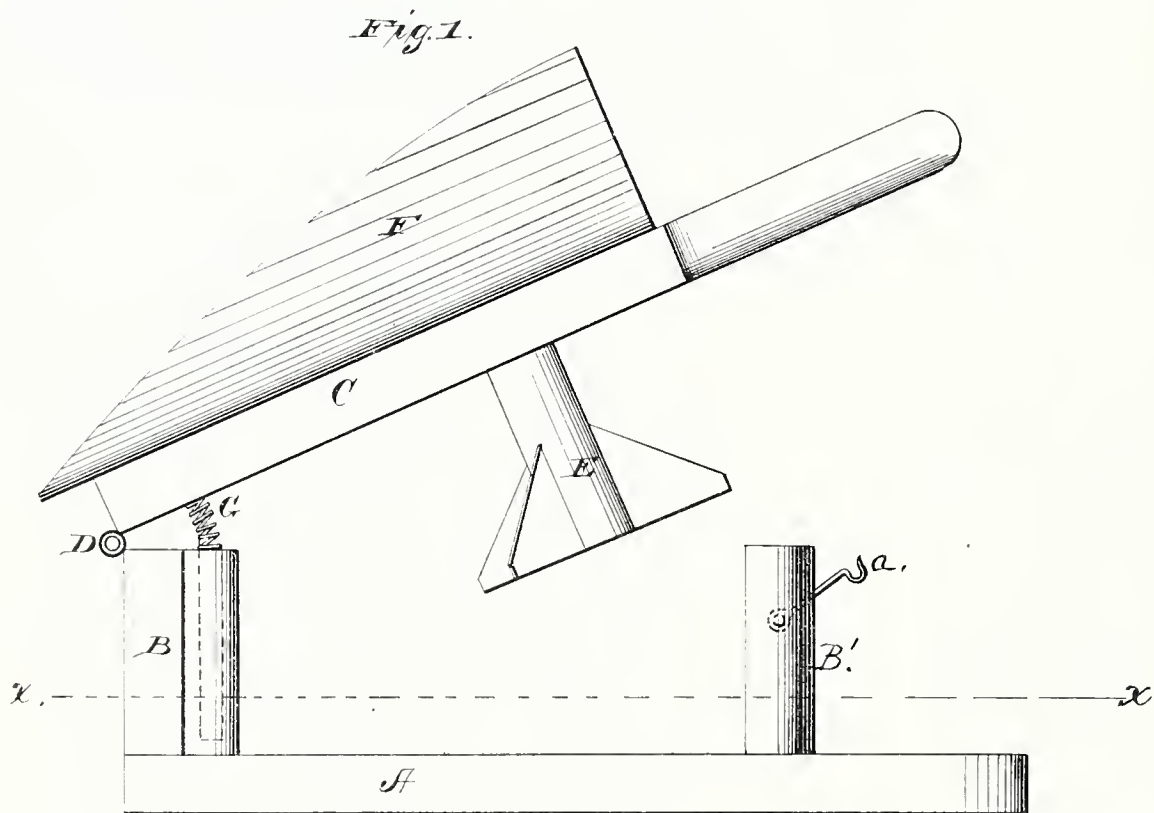
HARIET M. CHAPMAN.

Witnesses:

CHAS. F. VAN HORN,

E. NICHOLLS.

S. COOPER.
 Apple Quartering and Coring Machine.
 No. 196,743. Patented Nov. 6, 1877.



Witnesses:
J. L. McMillan
Adela Ellispie

Inventor:
Sarah Cooper

UNITED STATES PATENT OFFICE.

SARAH COOPER, OF MORRISONVILLE, PENNSYLVANIA.

IMPROVEMENT IN APPLE QUARTERING AND CORING MACHINES.

Specification forming part of Letters Patent No. **196,743**, dated November 6, 1877; application filed February 3, 1877.

To all whom it may concern:

Be it known that I, SARAH COOPER, of Morrisonville, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Apple Cutting and Coring Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a side view of my improved invention. Fig. 2 is a top-plan view of the conductor detached from the machine, and Fig. 3 is a section taken on the line *x x* of Fig. 1.

Similar letters of reference occurring on the several figures indicate like parts.

My invention relates to an improved construction of apple cutting and coring machines; and it consists in the details of construction and general arrangement of parts, all as will be hereinafter more fully described, and pointed out in the claims.

Referring to the drawings, A represents the base or bed piece of the machine, provided with an upright, B, at the rear, and to the top of which is pivoted the lever C, by means of the hinge D, as shown. E represents the hollow metallic cutter and corer, having four cutting-blades at its base, arranged at right angles to each other, the hollow stem being attached to and passing through the lever C, and projecting above the same into the metallic conductor F.

A coiled spring, G, is arranged in a vertical opening in the upright B, directly under the rear part of the lever, to keep the same in a position to receive the apple under the cutter and corer E, and also by which the said lever is elevated automatically for the reception of the next succeeding apple, and so on.

To the front of the base A is arranged an upright, B', having a suitable hook or catch, *a*, pivoted thereto on one side, and which is adapted to engage with a pin on the lever C, to hold the same down upon the uprights when it is desired to pack the machine in a small

space for shipment, or for carrying from place to place.

The construction of my invention being as described, the machine, when in operation, is placed across the open top of a barrel or other suitable vessel, and the apples placed, one by one, under the cutter and corer E. The lever C is then depressed by the hand, which causes said corer and cutter to pass down through the apple, the slices or quarters of which drop in the vessel beneath, while the core is forced upward through the tube by the succeeding cores, and, dropping into the conductor F, is ejected therefrom, by the next upward movement of the lever C, into a vessel placed to receive them.

The advantages of my invention will be readily seen, inasmuch as I am enabled to provide a machine possessing lightness and economy, and combining a high degree of efficiency and rapidity of operation, with a ready adaptation to the purpose intended.

I am aware that pivoted levers provided with a cutter and corer are not new, nor do I desire to claim, broadly, such a construction; but

What I do claim as new and useful is—

1. As an improved article of manufacture, an apparatus for cutting and coring apples, consisting of the levers C, provided with the conductor F and cutter and corer E, uprights B B', spring G, and base A, the several parts being combined and arranged to operate substantially as shown and described.

2. In a machine for cutting and coring apples, the combination of the lever C, provided with the conductor F, and cutter and corer E, with the uprights B B' and base A, substantially as specified.

3. In a machine for cutting and coring apples, the combination of the cutter and corer E with the lever C and conductor F, substantially as and for the purpose specified.

SARAH COOPER.

Witnesses:

WM. L. McMILLAN,
ADDA GILLESPIE.





M. M. STEUBER.
Doll.

No. 205,314.

Patented June 25, 1878.

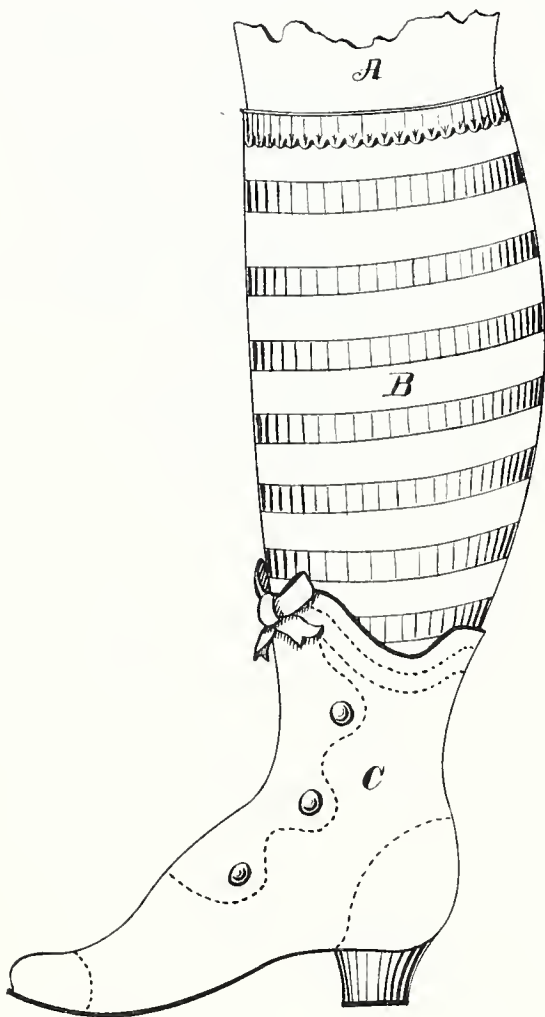


Fig. 1

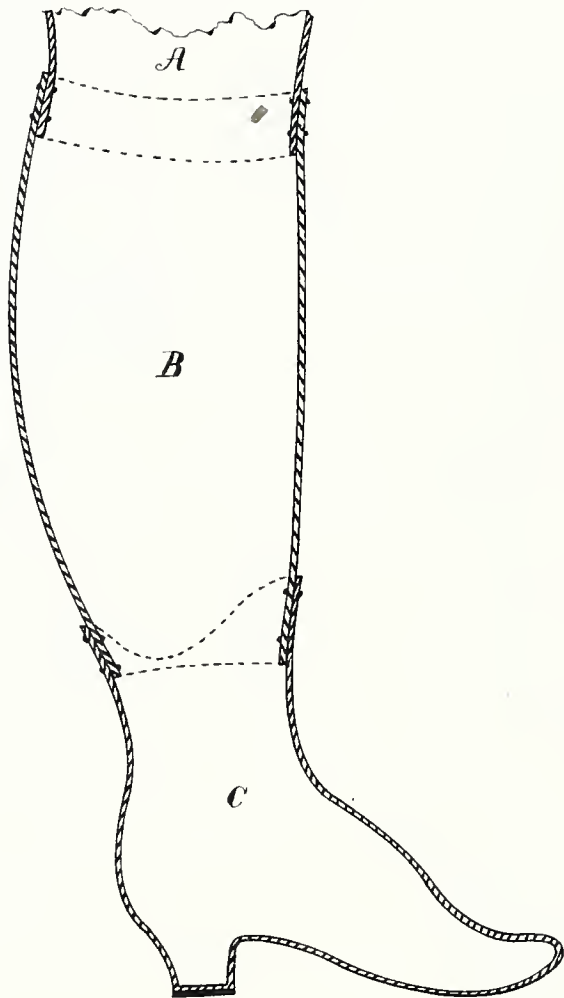


Fig. 2

Attest:
A. A. Leithrong.
James H. Lange.

Inventor:
Mary M. Steuber
per Edson Bros.
Attorneys.

UNITED STATES PATENT OFFICE.

MARY M. STEUBER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN DOLLS.

Specification forming part of Letters Patent No. **205,314**, dated June 25, 1878; application filed March 5, 1878.

To all whom it may concern:

Be it known that I, MARY M. STEUBER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Dolls, which improvement is fully set forth in the following specification and accompanying drawing.

In the drawing referred to, Figure 1 is a view of the leg, stocking, and boot complete. Fig. 2 is a vertical transverse section through the leg, stocking, and boot.

This invention relates to a class of doll-bodies that are completed for the trade, with stockings and boots; and it consists in the combination, with the leg of a doll, of a stocking and boot so formed as to make the whole in one thickness of material only, and complete in one sewing, thereby obviating, as in the old style, the necessity of first forming the leg and foot of the doll, filling same, and then making, drawing on, and securing in place both the stocking and boot.

The following is a description of my invention: The body and legs above the knees are made and filled in the ordinary way. Below the knee A in the drawings is a portion of the improved leg. B is the stocking, sewed to A, taking the place of the usual extension of the leg proper. C is the boot, sewed at its upper part to the lower part of the stocking B, this also taking the place of the ordinary extension of the ankle and foot as now made. The leg

A, from the knee-joint, the stocking B, and boot C are cut to the desired size and shape, sewed together, as stated above, the back seams closed, and the leg, stocking, and boot turned and filled, making the same complete.

It will be seen from the above description that an improved form and neater appearance, and at a material reduction in the cost of manufacture, is secured by this improvement.

I do not claim the combination, with the leg and foot of a doll, of a stocking and boot when made in the ordinary way; but

What I do claim is—

1. The combination, with the upper part of the leg of a doll, of the lower part of the leg A, stocking B, and boot C, when formed, put together, and constructed substantially as described, and for the purpose set forth.

2. In the manufacture of legs for dolls, the process herein described, which consists in sewing the stocking B to the leg A and the shoe C to the stocking B previous to sewing or uniting the back seams, then uniting and filling, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

MARY M. STEUBER.

Witnesses:

J. GORDON SHOWAKER,
HENRY SMITH.

UNITED STATES PATENT OFFICE.

AMANDA OWEN, OF WILLIAMSPORT, PENNSYLVANIA.

IMPROVEMENT IN MEDICAL COMPOUNDS.

Specification forming part of Letters Patent No. **200,331**, dated February 12, 1878; application filed August 31, 1877.

To all whom it may concern:

Be it known that I, Mrs. AMANDA OWEN, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Medical Compounds; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a medical compound for the cure of coughs, colds, and general debility, and which will also act as an appetizer and tonic, and as an invigorator for the system.

Its component parts and the method of preparing it are as follows: I take of flowers of hops, three pounds; bark of wild cherry, (finely powdered,) three pounds; buds of balm of Gilead, two pounds; flowers of chamomile, two pounds; stalks of *Absinthium*, (wormwood,) three pounds; bark of *Xanthoxylum*, (prickly-ash,) two pounds; finely-powdered roots of *Aralia nudicaulis*, (spikenard,) from which the pith has been extracted, three pounds; and raspings of quassia, two pounds. This I macerate with a sufficient quantity of water—say about six gallons—for from six to twenty-four hours. I then drain off the water, add fresh water, (so as to get all the strength of the materials,) macerate again, and drain off the water. I then strain the water, and boil it down, by a gentle heat, until about one-third has evaporated, leaving, say, eight gallons. I then add sugar enough to sweeten and preserve the decoction, and of tar,

six ounces, and of spirit anisius, (anise,) four ounces, the tar having first been separately macerated with water or alcohol to dissolve it, when it is ready for use.

The action of no one of these ingredients interferes with that of any other one, and each has a slightly different action in the right direction.

The medicinal compound herein described I have found to be a most valuable tonic expectorant for relieving irritable and harassing coughs, whether they be due to pulmonary, cathartic, or to gastric affections, or to a combination of all. When given in doses of from a table-spoonful to half a wine-glassful, four times a day, it will be found to relieve in almost every instance.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The medicinal compound herein described, consisting of a decoction of flowers of hops, bark of wild cherry, buds of balm of Gilead, flowers of chamomile, stalks of wormwood, bark of prickly-ash, roots of spikenard, with pith extracted, and raspings of quassia, sugar, tar, and spirits of anise, in about the proportions herein specified, for the purposes set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

AMANDA OWEN.

Witnesses:

W. R. HULL, M. D.,
J. B. DUBLE.

E. DELONG.
Steam and Fume Box.

No. 201,168.

Patented March 12, 1878.

Fig. 1

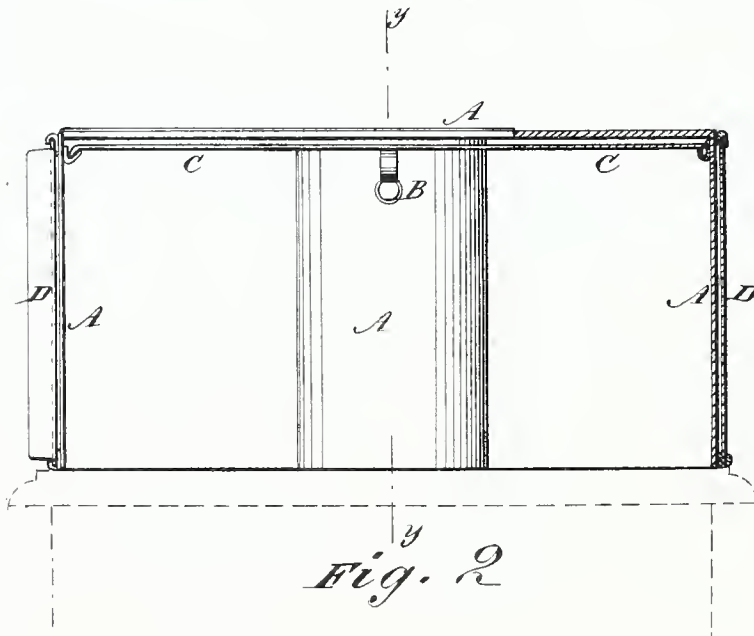
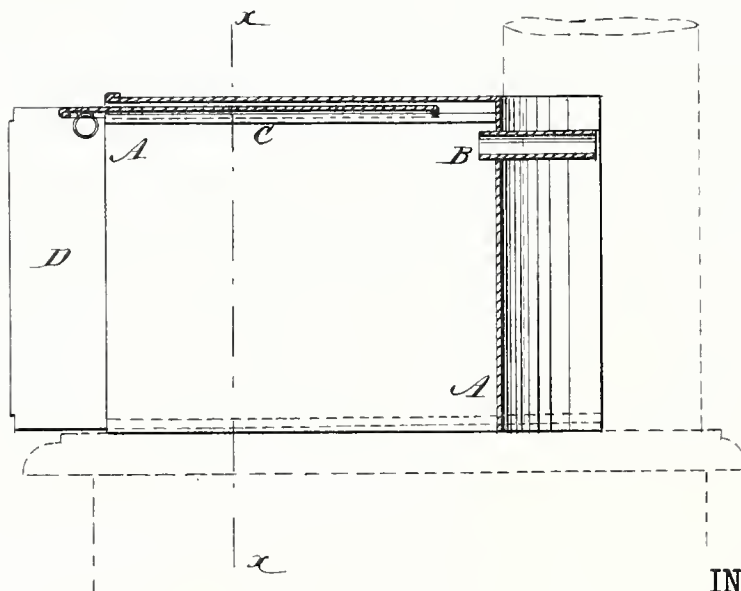


Fig. 2



WITNESSES:

C. Nereux
E. Sedgwick

INVENTOR:

E. DeLong
BY *Mumford*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ELIZABETH DELONG, OF STONE CHURCH, PENNSYLVANIA.

IMPROVEMENT IN STEAM AND FUME BOXES.

Specification forming part of Letters Patent No. **201,168**, dated March 12, 1878; application filed January 8, 1878.

To all whom it may concern:

Be it known that I, ELIZABETH DELONG, of Stone Church, county of Northampton, and State of Pennsylvania, have invented a new and Improved Steam or Fume Box, of which the following is a specification:

Figure 1 is a front view of my improved device, partly in section, through the line *x x*, Fig. 2. Fig. 2 is a longitudinal section of the same, taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved box to be placed upon the top of a stove to collect the steam from cooking-vessels while cooking food, and keeping it warm after it has been cooked, to prevent the steam and odors from spreading through the house, and which shall be simple in construction, easily applied to and detached from the stove, and conveniently kept clean.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

A is a box, made of such a size as to rest and fit upon the back part of the top of a cooking-stove. The box A is made open at the bottom and front, and has a semi-tubular cavity formed in its rear side to receive and fit upon the stove-pipe.

From the upper rear part of the box A a small tube, B, projects, to enter a small hole formed in the stove-pipe to receive it, so that all the steam and odors arising from the food while being cooked, and after it has been

cooked, may be drawn into the stove-pipe by the draft through it.

To give more convenient access to the front of the stove, the box A is provided with a sliding door or extension, C, upon the top, and with sliding or swinging doors or extensions D at the sides, which may be readily pushed back out of the way when desired.

If desired, the front of the box A may be provided with doors; but usually this will not be necessary.

I am aware that it is not broadly new to use a heating attachment adapted to receive its heat from the top of the stove or the ovens, and the fumes from the cooking-vessels, and having pipes that connect with the smoke-flue; also, with a drawer that fits over the front of the stove-top; also, with the escape-flue at the upper rear part of the box, but mine is entered from the sides of the box by means of slides or doors, which can be readily pushed back out of the way; also, the top slide projects so as to admit of shifting pans or their contents while frying or baking, and is easily adjusted to the stove, or removed in order to clean it.

What I claim as new is—

The box A, adapted to fit on the top of a cooking-stove, and having the slides C D at the top and sides, for the purpose specified.

ELIZABETH DELONG.

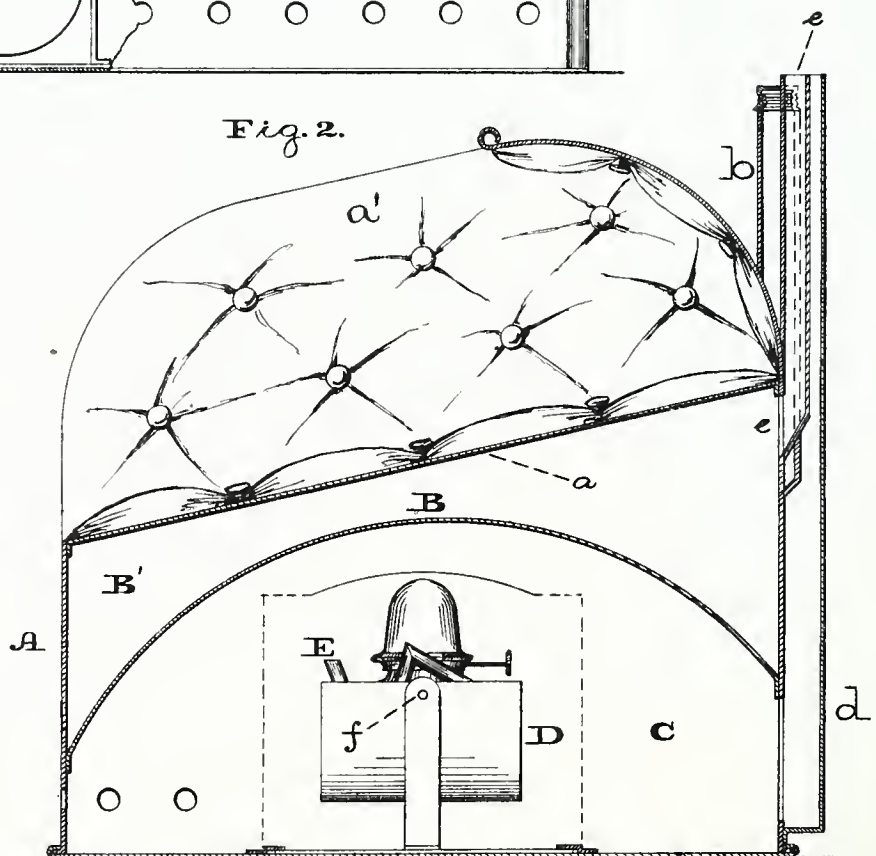
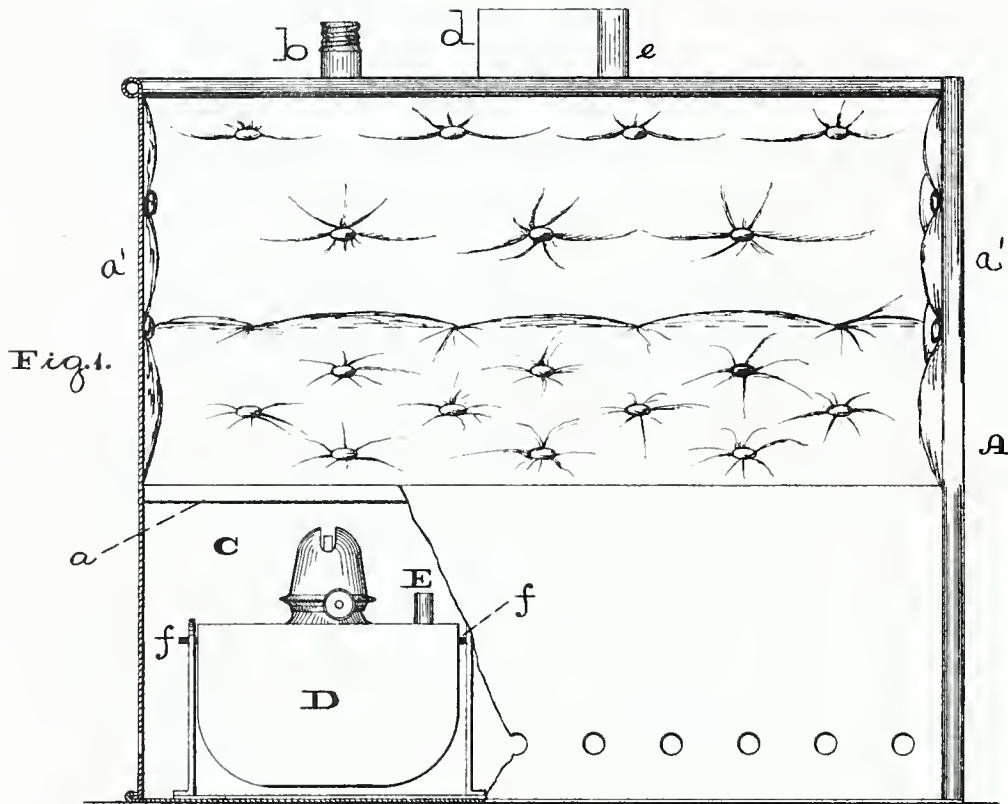
Witnesses:

D. R. DELONG,
H. H. W. HIBSHMAN,

M. E. BEASLEY.
Foot-Warmer.

No. 202,919.

Patented April 30, 1878.



Witnesses:

R. P. Grant,

W. F. Kitchen

Inventor:

Maria E. Beasley,

by

John A. Wiedersheim
ATTORNEY.

UNITED STATES PATENT OFFICE.

MARIA E. BEASLEY, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN FOOT-WARMERS.

Specification forming part of Letters Patent No. **202,919**, dated April 30, 1878; application filed March 6, 1878.

To all whom it may concern:

Be it known that I, MARIA E. BEASLEY, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Foot-Warmers, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a front view, partly broken away, of the foot-warmer embodying my invention. Fig. 2 is a transverse section thereof in line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists of a foot-warmer, having a tread, water-chamber, lamp-chamber, and other appurtenances, as will be hereinafter set forth.

Referring to the drawings, A represents the body or case of the foot-warmer, whose upper face *a* constitutes the tread or rest for the feet. B represents a wall, which is of arch form, and is secured to the sides of the body below the tread *a*, so as to form a chamber, B', into which water will be admitted by means of a pipe, *b*, properly applied. The arch form of the wall provides an enlarged water-space and heating-surface, the necessity of a large body or case being thereby obviated. Between the wall B and bottom of the body A there is a space or chamber, C, for the reception of one or more lamps, D, whose flame or heat is directed against the wall B, for heating the water in the chamber B'. A pipe, *d*, communicates with the space C and the atmosphere, for passing off the smoke, &c., of the lamp or lamps, and a pipe, *e*, communicates with the chamber B' and atmosphere, for the escape of steam generated in said chamber.

It will be seen that when the chamber B' is properly supplied with water, and the lamp or lamps D are lighted, the hot water of said chamber imparts a high degree of warmth to the tread or rest *a*, whereby the feet placed

on the latter will be duly warmed, said tread and the uprights *a'*, arising from the sides thereof, being properly covered or upholstered for retaining heat and providing a soft and comfortable support for the feet.

Owing to the liability of foot-warmers to overturn and upset the lamps therein, I provide the latter, at their upper ends, with journals *f*, and mount them on uprights preferably attached to the supporting plate or slide, by which the lamp or lamps may be moved in and out of the chamber or space C, the side of the latter being provided with a suitable door for evident purposes.

It will be noticed that if the warmer is overturned, the lamps at once right themselves by turning on their axes *f*, so that the flame is uppermost, and danger of explosion of the lamps is obviated.

In order to pass off any accumulated and dangerous vapor in the reservoir or body of the lamp, I provide a pipe, E, which forms an external communication for the reservoir, and allows the vapor to escape therefrom.

Suitable openings are made in the case A to admit air to the lamp-chamber, and handles may be provided for the ready transportation of the device.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The body A, with water-chamber B', lamp-chamber C, water-pipe *b*, steam-pipe *e*, and smoke-pipe *d*, all combined and operating as described.

2. The foot-warmer consisting of the body A, with tread *a*, water-chamber B', lamp-chamber C, pipes *b d e*, and self-righting lamp or lamps D, combined and operating substantially as and for the purpose set forth.

MARIA E. BEASLEY.

Witnesses:

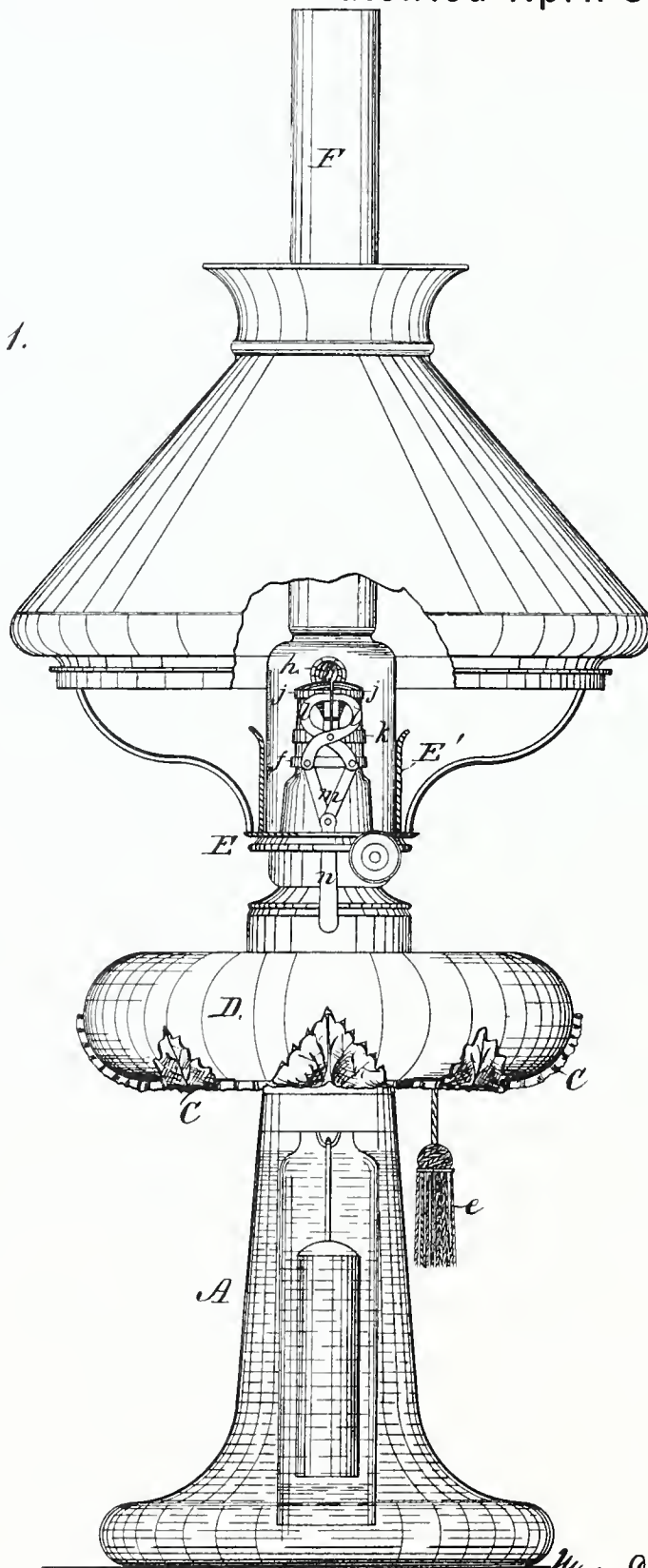
JOHN A. WIEDERSHEIM,
H. E. GARSED.

E. G. HALLER.
Self-Lighting Lamp.

No. 203.145.

Patented April 30, 1878.

Fig. 1.



WITNESSES:

W. W. Hollingsworth
Edw. W. B. B. B.

INVENTOR:

Mrs. E. G. Haller

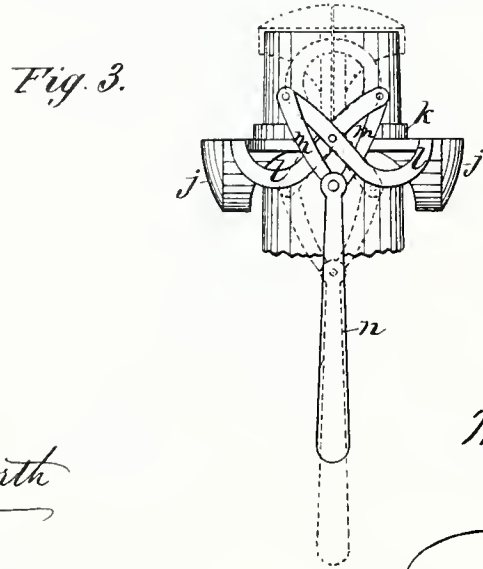
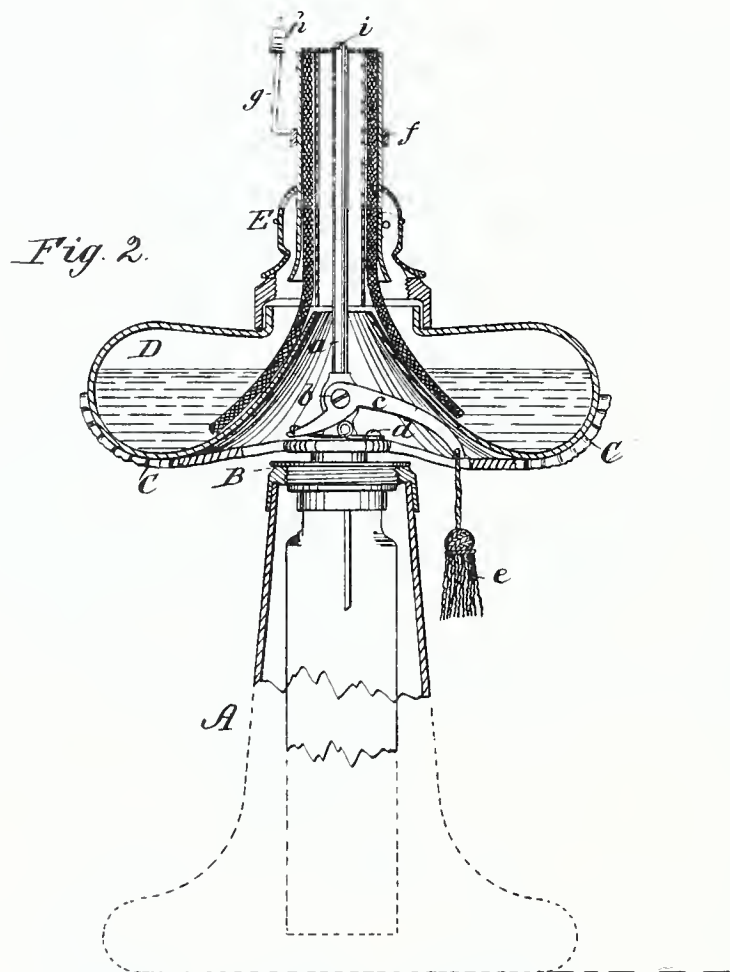
BY

Wm. O. C.
ATTORNEYS.

E. G. HALLER.
Self-Lighting Lamp.

No. 203,145.

Patented April 30, 1878.



WITNESSES:

W. W. Hollingsworth
Edw. W. Byrn

INVENTOR:

Mrs. E. G. Haller

BY

Samuel L. Haller
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ELLA G. HALLER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SELF-LIGHTING LAMPS.

Specification forming part of Letters Patent No. **203,145**, dated April 30, 1878; application filed December 19, 1877.

To all whom it may concern:

Be it known that I, Mrs. ELLA G. HALLER, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and Improved Self-Lighting Lamp; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a side elevation of the completed lamp. Fig. 2 is a vertical sectional view, showing the connection and relation of the lamp-font to the hydrogen-generator. Fig. 3 is an enlarged detail view of the extinguishing devices.

The object of my invention is to provide a simplified form of self-lighting and self-extinguishing lamp, constructed upon the general principle of utilizing a self-regulating hydrogen-gas generating apparatus provided with a stop-cock and vent-tube arranged in the burner, so that the hydrogen flame from the bent tube serves, when the hydrogen is ignited by contact with a piece of platinum sponge, to ignite the wick.

The invention consists in the arrangement of the oil-font with respect to the gas-generating apparatus, whereby the construction of the lamp is simplified and the parts better adapted to each other.

It also consists in the particular construction and arrangement of a basket-support, for receiving and containing the removable oil-font, in the improved means for holding the platinum sponge in its place, and the improved arrangement of the extinguishing devices, all as hereinafter more fully described.

In the drawing, A represents a self-regulating hydrogen-gas generator, consisting of an outer receptacle for the sulphuric acid and water, and an inner inverted bell-jar, containing a quantity of zinc in suspension in said bell-jar, which latter has an outlet for the gas above. This generator is fashioned into a pedestal for the lamp, as has been heretofore done, and embodies in itself no new feature. From the removable top or screw-cap B, Fig. 2, of this generator there rises a vertical tube, *a*, and upon this tube is fastened a basket or ornamental support, C, for the oil-receptacle, made large enough to contain and protect the same,

while in the tube is arranged a cock or plug-valve, *b*, having attached to it a lever, *c*, held up by a spring, *d*, while a tassel and cord, *e*, depend from the end of the lever down past the basket-support to a position within convenient reach for operating said lever, so as to turn the valve at will and allow the gas to escape from the bell-jar into the tube *a*, the lever being restored to its position and the valve closed by the action of the spring.

D is the lamp-font or oil-receptacle, which is blown from glass into a flat shape, with its bottom worked up in a conical form by means of a tool, and perforated to form a central hole, passing entirely through the glass receptacle, but leaving an annular opening between its raised and perforated bottom and the opening in the top portion, in order to give passage to the wick. To this font is applied an ordinary form of Argand or tubular burner, E, the lower end of the inner tube of said burner being arranged to fit above the perforation in the raised bottom of the glass font, so as to continue this opening to the top of the burner. This construction of oil-font allows the same to be placed concentrically above the gas-generating apparatus and be supported by the ornamental basket-work C, while the central opening through the oil font and burner receives the tube *a* of the gas-generator.

E' is a spring-sleeve of the ordinary construction, which is placed upon the lower portion of the burner and holds the chimney F. Just above this sleeve is arranged a detachable collar, *f*, supporting an arm, *g*, which at its top carries a circular frame, in which is arranged a piece of platinum sponge, *h*. This piece of platinum sponge is held at a little distance from the burner, and in such position as to be struck by the jet of hydrogen escaping from the orifice *i* in tube *a* leading from the gas-generator, so that when the lever *c* is depressed by pulling upon the cord and tassel *e* the valve *b* is opened, and the hydrogen passes up the tube through the center of the oil-font, and, escaping at the orifice *i*, strikes the platinum. The peculiar action upon the surface of the platinum sponge, as well known, causes it to become red-hot, igniting the hydrogen jet, and the flame of the latter impinges upon and ignites the wick.

To extinguish the lamp thus ignited without the danger involved in blowing down the chimney, and without permitting the escape of offensive volumes of smoke, I have arranged in connection with the lamp, and adapted to the same, an extinguisher. It consists of two semicircular cap-pieces, *j j*, Figs. 1 and 3, provided with arms *l l*, which are pivoted to a collar, *k*, which collar is applied to the burner just above the collar which supports the platinum sponge. To the arms *l* are pivoted links *m m*, and to the latter a pendent bar, *n*, is fastened, and so arranged that by pulling upon the same the cap-pieces are drawn together above the circular wick, to completely exclude the supply of air from the wick and thus extinguish the flame.

I do not claim, broadly, these pivoted cap-pieces in an extinguisher, as they have been employed before, but only the extension of their arms and the fastening of the same by a single pivot to a detachable collar. This makes a simple and economic construction, while the removability of the collar permits the devices not only to be separated from the lamp to facilitate cleaning, but enables the user to put another one in its place, when necessary, without the services of a skilled mechanic. The same advantages also apply to the removable arrangement of the collar carrying the platinum sponge.

With respect to the construction of the oil-font, also, I am aware that a substantially similar construction has been heretofore employed, and I therefore only claim its arrangement with respect to other parts, with the central tube passing up through the opening. By passing the generator-tube up through the opening all of the parts are concealed from view and protected from dust, while the tube in this position serves to hold the font more firmly in the basket and without danger of being knocked off.

As to the basket C, I am aware that similar constructions have been employed in other relations to sustain an oil-font, and I therefore only claim said basket when combined with and located concentrically upon the vertical tube of the gas-generating apparatus, in which relation it is a necessary feature to cause the weight of the centrally-perforated font to be sustained by the metal cap of the gas-generating apparatus, while still preserving for the font a protective seat.

Having thus described my invention, what I claim as new is—

1. The oil-font constructed with a central opening, and combined with an Argand burner and with gas-generating apparatus, substantially as described, having a vent-tube passing up through said tube and burner, as and for the purpose described.

2. The support or basket C, made of a size sufficient to receive and contain the removable oil-font, and located upon the central vent-tube *a* of the gas-generating apparatus A, in combination with the same and the concentrically-arranged and centrally-perforated oil-font, substantially as described.

3. The combination, with a tapering tubular burner and a hydrogen-gas tube leading up through the same, of the detachable collar *f*, carrying the platinum sponge, and adapted to be removably secured upon the said burner, substantially as described.

4. The combination, with a tapering tubular burner, of the removable collar *k*, adapted to fit upon the tubular burner, and having pivoted thereto the arms *l*, links *m*, and bar *n*, substantially as and for the purpose described.

The above specification of my invention signed by me this 17th day of December, 1877.

MRS. ELLA G. HALLER.

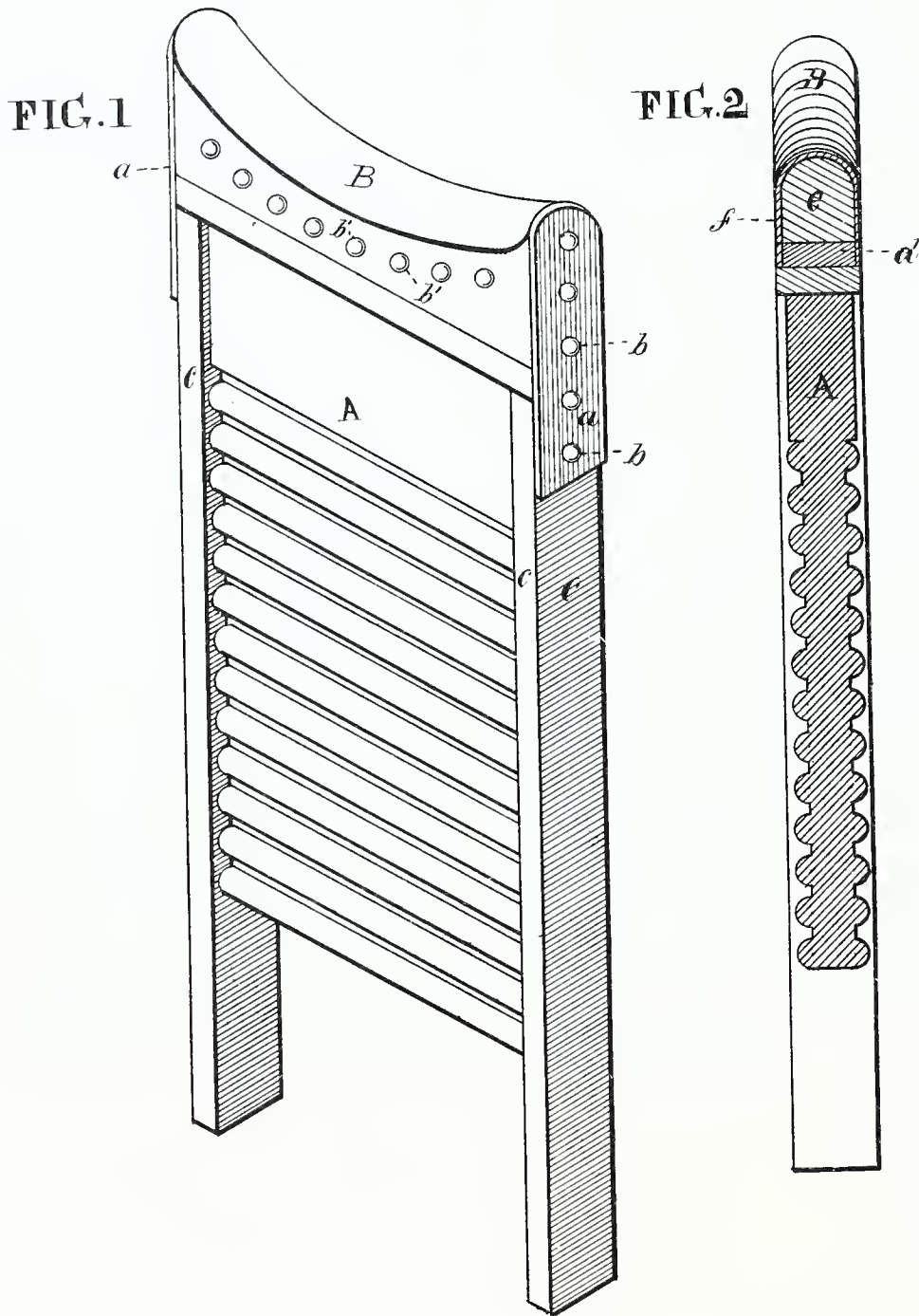
Witnesses:

EWD. W. BYRN,
WM. L. HALLER.

B. KAUFMANN.
Wash-Board.

No. 206,881.

Patented Aug. 13, 1878.



Witnesses

Thomas J. Bewley

S. H. Millett

Inventor

Bertha Kaufmann

per Stephen Ustick attorney

UNITED STATES PATENT OFFICE

BERTHA KAUFMANN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF
ONE-THIRD OF HER RIGHT TO LEOPOLD J. SPEER, OF SAME PLACE.

IMPROVEMENT IN WASH-BOARDS.

Specification forming part of Letters Patent No. **206,881**, dated August 13, 1878; application filed
December 8, 1877.

To all whom it may concern:

Be it known that I, BERTHA KAUFMANN, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Wash-Boards, which improvement is fully set forth in the following specification and the accompanying drawings, in which—

Figure 1 is an isometrical view of an ordinary wash-board with my improvement attached. Fig. 2 is a vertical section through the middle of Fig. 1.

It is well known that in washing with the ordinary wash-board the bending forward is very hard on the breast, especially when the operation is continued for several hours.

To give relief to the operator is the object of my invention.

The invention consists of a breast-rest on the upper end of the board, of concave form to receive the breast, and cushioned to admit of an easy pressure. The cushioned part may be made separate, and attached to any ordinary wash-board by confining metallic strips to its ends and the edges of the wash-board at its upper end, by means of screws or otherwise; or this piece may be confined in any other convenient manner; or, in the construction of the wash-board, the extension and the board may be made in a single piece, if desired.

In the accompanying drawings, A represents an ordinary fluted wash-board, and B a cushion, having straps *a a* projected downward from its lower edge for the confinement of the cushion to the wash-board, the tacks *b* or screws passing through perforations in the straps and into the stiles *c c*, for confining the lower ends of the straps. The upper ends of

the straps are confined to the base-strip *d* of the cushion in the same manner. The filling *e* of the cushion is confined in its place on the base-strip by means of the cover *f*, which is secured at its lower edges by means of the tacks *b'*.

Instead of confining the cushion permanently in its place, as represented, it may, if desired, be made detachable by having the metallic straps *a a*, or wooden strips which may be used instead to fit vertical grooves of dovetail or other form, or in any other convenient manner.

In order to adapt my invention to ordinary wash-boards already made, the attachment of separate cushions is very easily effected, as may be readily seen by the above description, so as to make them detachable; but in the construction of new boards the stiles *c c* may extend above the upper end of the wash-board far enough to receive the cushion between them, and the edges of the cover *f* be confined to them and the upper part of the board; and in putting the cushion on an ordinary board the strips of wood may be fastened permanently to the stiles *c c*, with their upper ends projecting far enough above the upper end of the board for the reception of the cushion, when it is not desirable to have the cushion detachable.

I claim as my invention—

The cushion B, having straps or strips *a a* on its ends, for connecting it with an ordinary wash-board, substantially as set forth.

BERTHA KAUFMANN.

Witnesses:

STEPHEN USTICK,
S. W. MILLETT.

M. HOLDEN.
Pocket-Spittoon.

No. 208,392.

Patented Sept. 24, 1878.

Fig. 1

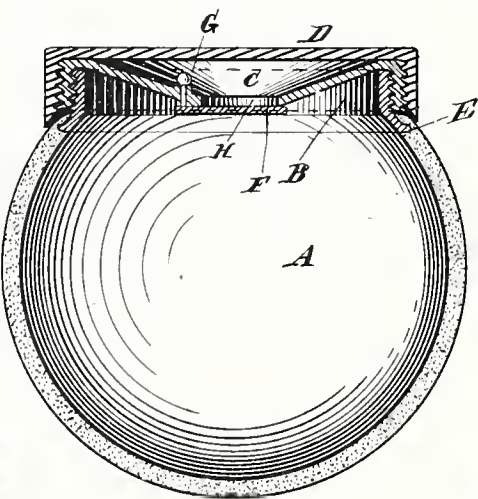


Fig. 4.

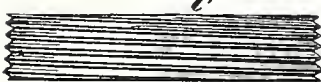


Fig. 5

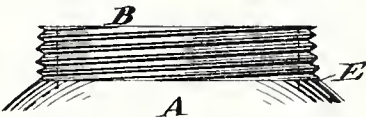
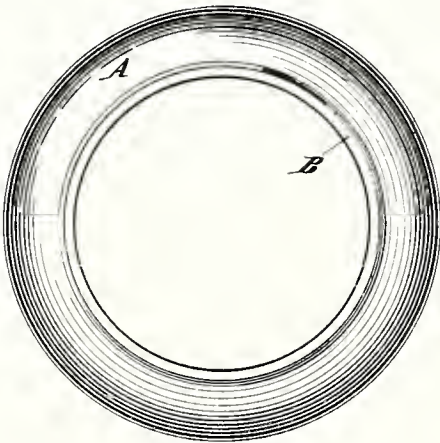
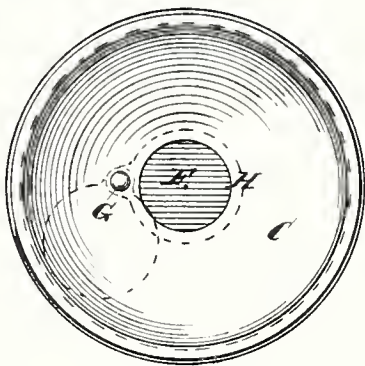


Fig. 3

Fig. 2



Attest

James H. Neal
D. C. Holden.

Inventor

Magdalene Holden

UNITED STATES PATENT OFFICE.

MAGDALENE HOLDEN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN POCKET-SPITTOONS.

Specification forming part of Letters Patent No. **208,392**, dated September 24, 1878; application filed December 29, 1877.

To all whom it may concern:

Be it known that I, MAGDALENE HOLDEN, of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Spittoons, of which the following is a specification:

My invention consists in the construction of a spittoon in such a manner that the same may be carried in the pocket without the least inconvenience to the party carrying it; also, it may be made in such a manner and of such material that it can be laid conveniently upon a stand or table beside the bed of the sick. It is mainly for those who cannot leave their beds, and for those who are troubled by any disease or affection of the throat or nasal passages which requires them to spit continually to find relief. The arrangements of the parts are such that the contents cannot find egress until the metallic cap is taken off or opened, as the case may be, thereby obtaining cleanliness.

In construction, the spittoon consists of either two or three parts. Three parts are advisable—first, the body, which may be made of various substances; secondly, the perforated cap; and, thirdly, the cover, which may be arranged in any manner, so long as it performs its function.

Referring to the accompanying drawings, Figure 1 represents a complete section of the article embodying my invention. Fig. 2 is a plan of the concave cap C, showing the hole H closed by slide F, and also the slide, in dotted lines, when the hole is opened. Fig. 3 represents a plan of the body A. Fig. 4 represents a side elevation of the concave cap C, showing left-hand thread. Fig. 5 represents a side elevation of the top of the body, showing right-hand thread.

A is the body of the spittoon. It would in general be made of rubber or other flexible material, but may be made of metal. The top or neck of the body should be made of metal or other solid substance, and is cemented to the body, or otherwise secured when the latter is of a different material. Upon the top or neck of the body A, I have a right-hand screw-thread cut. Upon this body-neck the con-

cave cap C is screwed. Upon the outer side of the cap C, I have a left-hand screw-thread cut. Upon the cap C the cover D is screwed. The cap C is made concave, for the reason that if the cover is off and the spittoon should become inverted the saliva will not run out.

The opening H in the cap C may or may not be covered by the slide F. It is not necessary to make the spittoon complete. The slide F is turned by the spindle G, which works tightly in its bearing.

The use of the right and left hand threads, as arranged, is to facilitate the opening of the spittoon, and to take the three parts of the article apart. The tendency of unscrewing the cover is to tighten the part C upon the body. If the screw-threads were both left-hand threads, in general, both the cover and cap C would come off together, when only the cover was desired to be taken off.

I do not limit myself to this method of fastening the cap C and the cover. The cover may be upon a hinge, and the cap screwed upon the body; or both may be upon hinges.

Furthermore, I do not claim that the cap C is necessary to my invention, yet I consider it desirable. Those spittoons which are made to carry in the pocket ought to be made of flexible material, so far as the body A is concerned. The joining of the body A with its upper part or head should be made perfectly water-tight. This is necessary to cleanliness.

I claim—

1. The concave cap C, provided with the slide F and spindle G, substantially as and for the purpose described.

2. The combination of the concave cap C and the cover D, substantially as and for the purpose described.

3. The body A, in combination with the cap C and cover D, substantially as and for the purpose described.

In testimony of which invention I hereunto set my hand.

MAGDALENE HOLDEN.

Witnesses:

FRANK P. BEAL,
D. G. HOLDEN.

M. F. POTTS.

Assignor, by mesne assignments, to THE ENTERPRISE MANUFACTURING Co., of Pennsylvania, and THE AMERICAN MACHINE Co., of Philadelphia, Pa.

Sad-Iron.

No. 8,925.

Reissued Oct. 7, 1879.

Fig. 1.

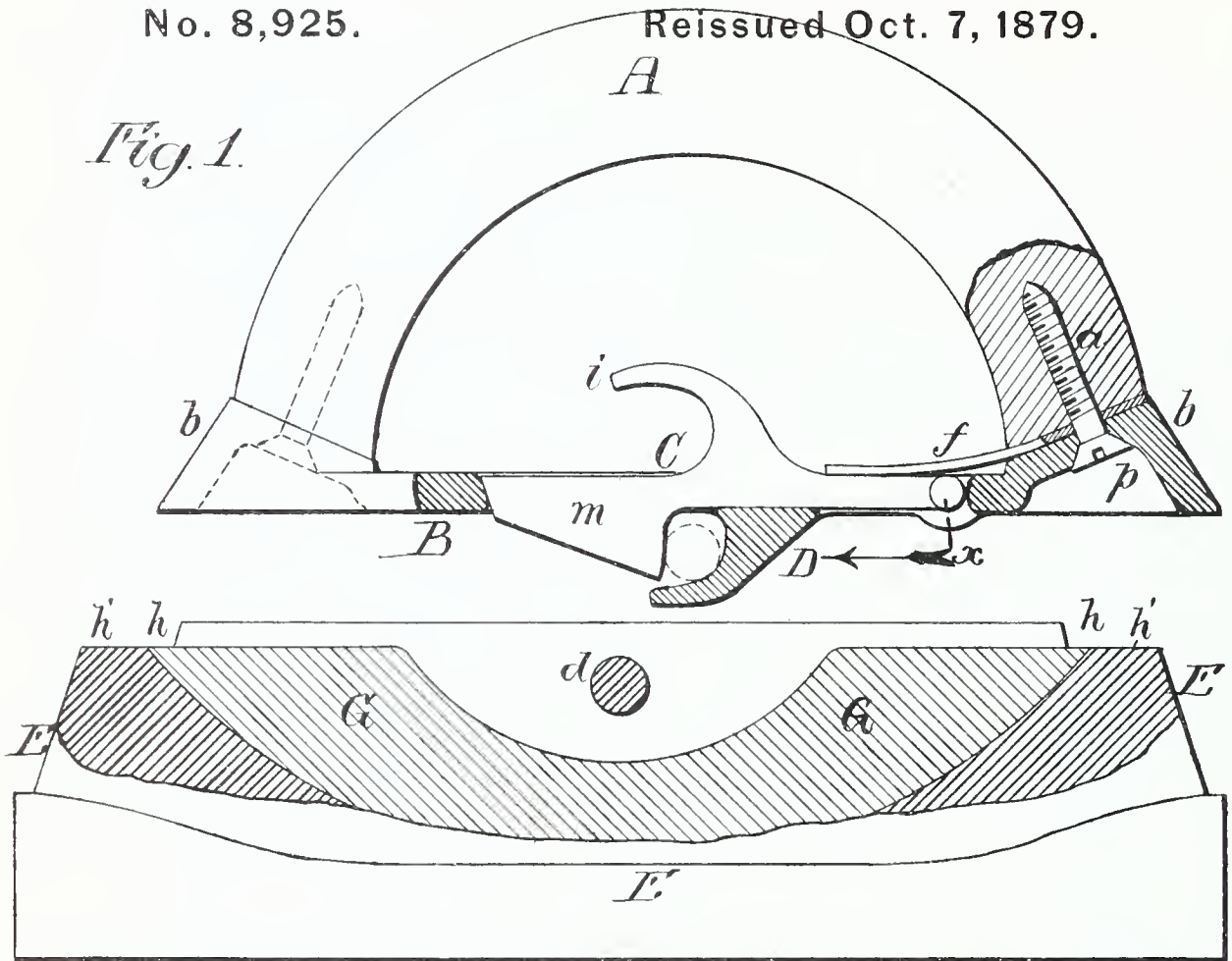
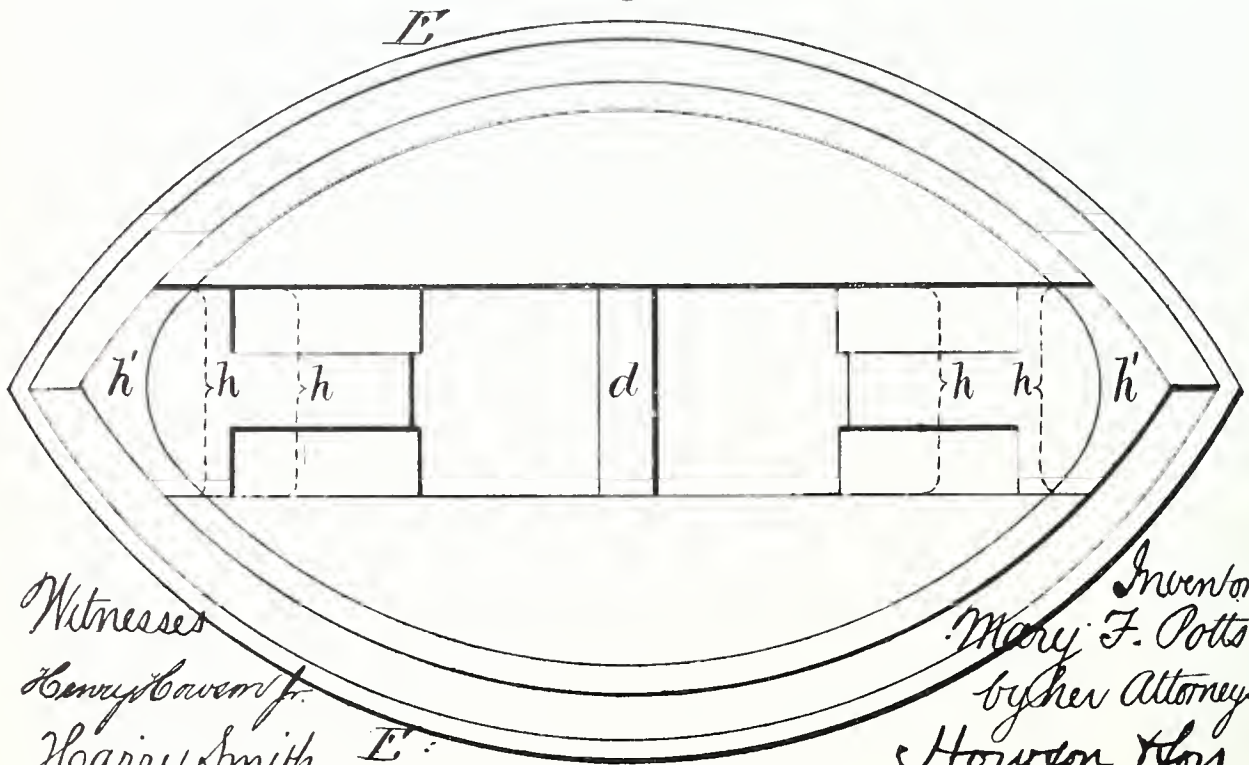


Fig. 2.



Witnesses
Henry Cameron Jr.
Harry Smith

Inventor
Mary F. Potts
by her Attorney
Howard Hon

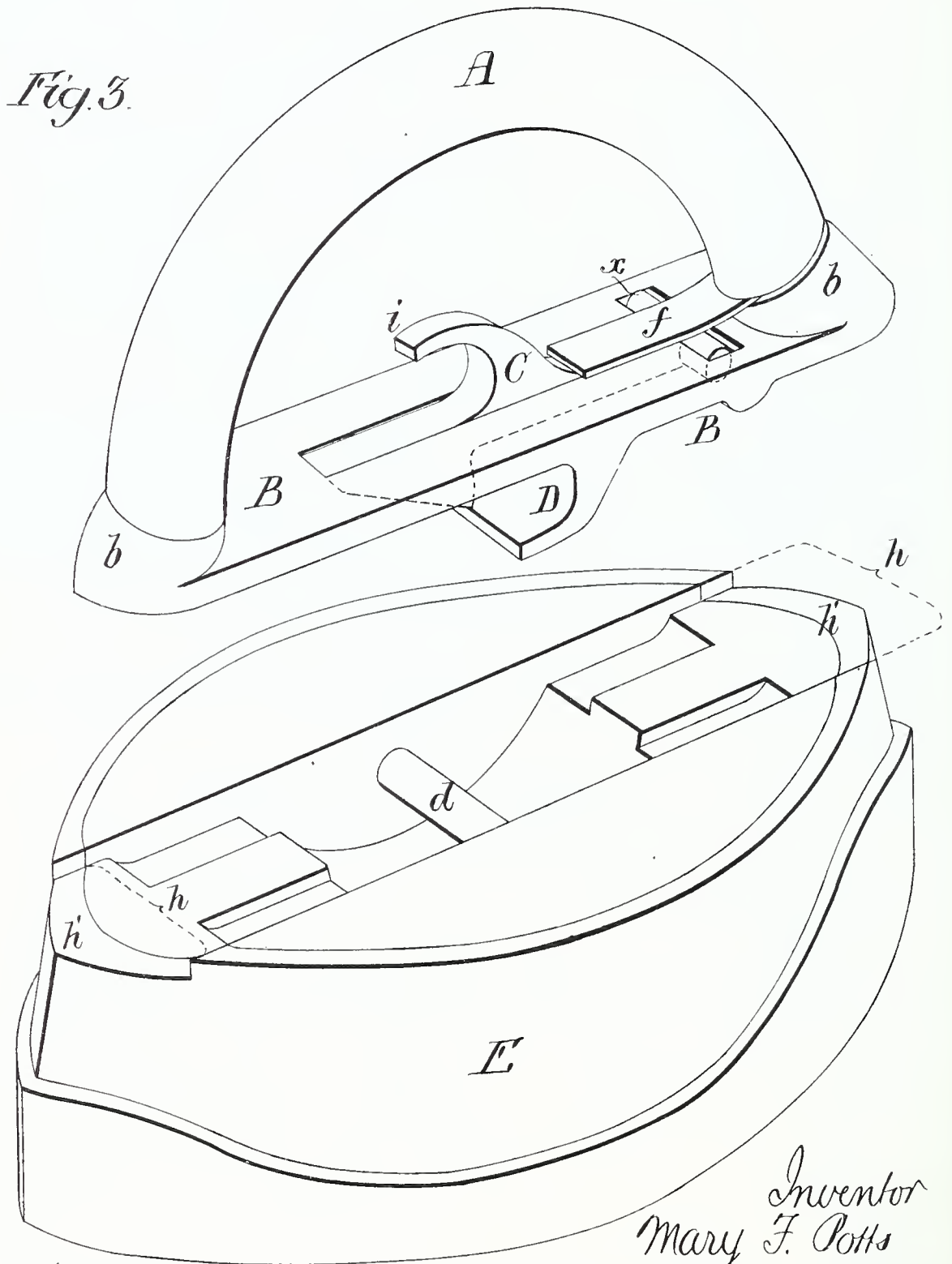
M. F. POTTS.

Assignor, by mesne assignments, to THE ENTERPRISE MANUFACTURING Co., of Pennsylvania, and THE AMERICAN MACHINE Co., of Philadelphia, Pa.

Sad-Iron.

No. 8,925.

Reissued Oct. 7, 1879.



Witnesses
Henry Howson Jr.
Harry Smith

Inventor
Mary F. Potts
by her Attorneys
Howson and Son

M. F. POTTS.

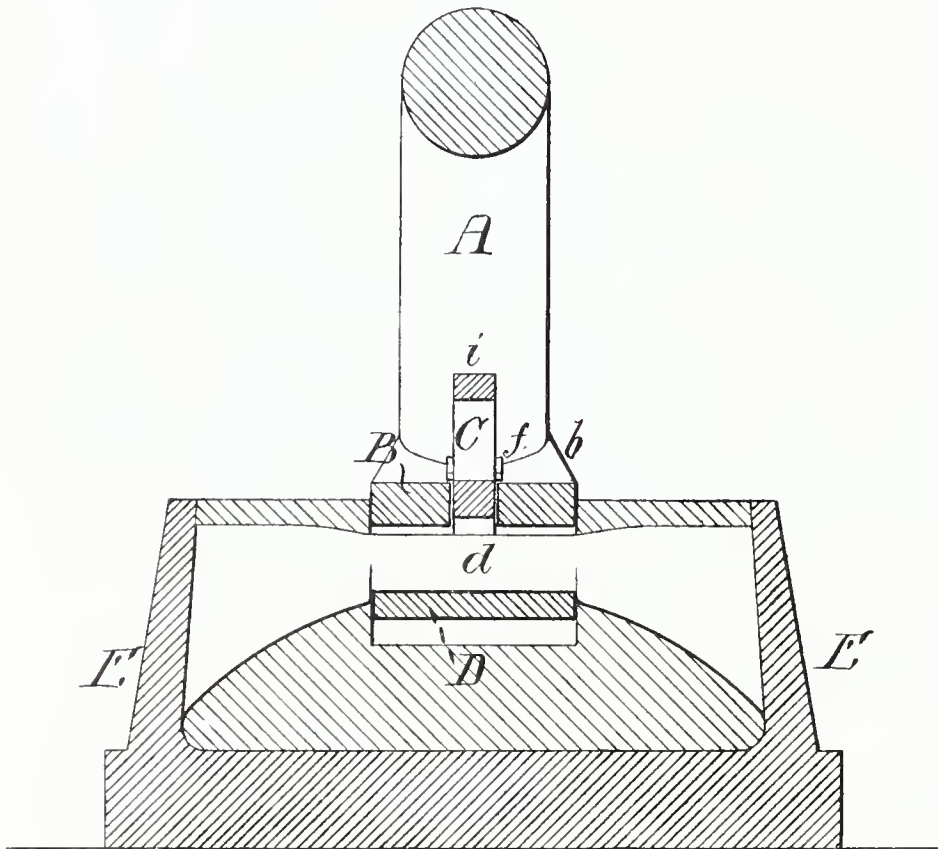
Assignor, by mesne assignments, to THE ENTERPRISE MANUFACTURING Co., of Pennsylvania, and THE AMERICAN MACHINE Co., of Philadelphia, Pa.

Sad-Iron.

No. 8,925.

Reissued Oct. 7, 1879.

Fig. 4.



Witnesses
Henry Howson Jr.
Harry Smith

Inventor
Mary F. Potts
by her Attorneys
Howson and Son

UNITED STATES PATENT OFFICE.

MARY FLORENCE POTTS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR,
BY MESNE ASSIGNMENTS, TO THE ENTERPRISE MANUFACTURING COM-
PANY OF PENNSYLVANIA, AND THE AMERICAN MACHINE COMPANY,
BOTH OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SAD-IRONS.

Specification forming part of Letters Patent No. 113,448, dated April 4, 1871; Reissue No. 5,102, dated
October 15, 1872; Reissue No. 8,925, dated October 7, 1879; application filed June 19, 1879.

To all whom it may concern:

Be it known that I, MARY F. POTTS, formerly of Ottumwa, county of Wapello, State of Iowa, but now of Philadelphia, Pennsylvania, did invent certain Improvements in Sad-Irons, for which Letters Patent No. 113,448 were granted to me April 4, 1871, and reissued to me October 15, 1872, No. 5,102; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of the combination of a wooden handle, the top and legs of which form a continuous arch rounded transversely, with a metal plate secured directly to the bases of the arch, and serving the purpose of strengthening the wood and retaining it in place, and also of carrying mechanism by which the handle is connected to and disconnected from the base of the sad-iron, all substantially as described hereinafter.

My invention also consists in the peculiar manner (described hereinafter) of combining a plate with the arched handle of wood, so as to insure the secure attachment of the two together; also, of the combination of a base having a recess and a cross piece or bar therein, with a handle having latching and releasing mechanism adapted to the said recess and cross-piece, as explained hereinafter; also, of the peculiar construction (described hereinafter) of the latching and releasing mechanism.

My invention also consists of the combination of a base pointed at both ends and a detachable handle arched and made alike at both ends with central latching mechanism available for locking the handle in either of two positions to the base, and thus permitting the instant application of the handle to the same.

In the accompanying drawings, Figure 1, Sheet 1, is a side view, partly in section, showing the handle and base of the sad-iron detached from each other; Fig. 2, a plan view of the base; Fig. 3, Sheet 2, perspective views of the handle and base detached from each other; and Fig. 4, Sheet 3, a transverse section of the sad-iron, showing the handle attached to the base.

In an ordinary sad-iron the handle, usually

supported on or forming part of legs attached to the base, is straight or horizontal, so that the hand which grasps the handle must always be in the same or nearly the same position in respect to the base.

In my improved handle A the legs and top are comprised in one continuous arched piece or segment of wood, rounded transversely and presenting a handle which can be grasped at such different points in relation to the base as comfort or convenience may suggest to the operator.

The ends of the arched handle A are connected together by a plate, B, having inclined abutments *b b* for the said handle to bear against. These abutments permit the introduction of the stems of the wood-screws *a a* into the handle in the inclined direction, in which they are most available for the secure attachment of the plate B to the said handle. (See Fig. 1.)

The abutments are recessed on the under side, as shown at *p*, so as to freely admit as well as conceal the screw-heads.

The handle A, being arched and entirely of wood, is necessarily weak; but this weakness is remedied by the plate B, which is secured directly to the bases of the wooden arch, and tends to retain the same in its proper shape. The plate moreover serves the additional purpose of carrying the latching mechanism described hereinafter.

The base E of the sad-iron is made of a shape substantially similar to that described in the Letters Patent No. 103,501, granted to me May 24, 1870—that is to say, it is widest in the middle and pointed at both ends and has a smooth face bounded by two curved and comparatively sharp edges.

In the top of the base, at each end of the same, is a recess, *h*, for receiving the plate B, for insuring the proper adjustment of the handle on the base, and for preventing the lateral displacement of said handle.

The handle is made detachable from the base, and is provided with latching and releasing mechanism, which I will proceed to describe.

The plate B has on its under side a permanent hooked jaw, D, and is longitudinally slotted for the reception of the latch-lever C, which is pivoted to the plate at *x*, the lever having on its under side a projection or jaw, *m*.

A spring, *f*, confined between one end of the handle and its inclined abutment on the plate, tends to depress the lever C to its bearings.

In the base is a recess large enough for receiving the latching-jaws, and within this recess is a cross piece or bar, *d*.

On applying the handle to the base, it is so adjusted that the latch-lever will bear on and be raised by pressure on the cross-piece *d*, thereby permitting the hooked jaw D to pass beneath the said cross-piece on pushing the handle in the direction of the arrow, Fig. 1, after which the lever will be quickly depressed by the spring, the cross-piece will be confined between the jaw of the lever and the fixed jaw D of the plate B, and the handle will be locked to the base, the plate B of the handle bearing on the bottom *h'* of the recesses *h*.

The handle may be released by raising the lever, which has a suitable projection, *i*, in a central position in respect to the handle, so as to be within reach of a finger of the hand which grasps the said handle. One or more of these cross pieces or bars *d* and one or more jaws D may be used.

In my former patent, No. 103,501, I described the packing of suitable non-conducting material in a recess in the base, this recess being such that the metal was thickest in the middle of the base; but in the present instance I so form the recess that the metal shall be thickest at the opposite ends, as will be seen by reference to Fig. 1, in which G represents the packing.

The bottoms *h'* of the recesses *h* present narrow ribs as the sole metallic bearings for the plate B of the handle, and these bearings have such limited areas that their efficacy as conductors of heat from the base to the handle is restricted.

It will be seen that the cross piece or bar *d* and the locking-jaws for seizing the bar occupy a central position, so that the handle can be fitted and locked to the base whether the former occupies the position shown in Fig. 1 or the reverse position; hence there need not be any hesitancy in applying the handle to the base.

This arrangement is especially adapted to

sad-irons having the handles arched and alike at both ends and bases pointed at both ends.

I claim as my invention—

1. The combination of the wooden handle A, the top and legs of which form a continuous arch, rounded transversely, with the metal connecting-plate B, secured directly to the bases of the arch, and latching mechanism carried solely by the plate, all substantially as set forth.

2. The combination of the arched handle A, of wood, with a metal plate, B, having inclined abutments or bearings for the said handle, substantially as specified.

3. The combination of the handle, the plate B, having inclined abutments recessed on the under side, and the screws *a*.

4. The combination, in a sad-iron, of a base having in the top a recess, and a cross piece or bar therein, with a detachable handle carrying a fixed and movable jaw for seizing the said cross piece or bar, all substantially as described.

5. The combination of the wooden handle and its plate B, carrying a fixed jaw and a movable jaw, with a base constructed for being locked to and released from the said jaws, all substantially as described.

6. The combination of the handle and its plate B, the hooked jaw D, and pivoted lever C and its jaw with the base having a recess for receiving the jaw and cross-piece or bar adapted to the same, substantially as set forth.

7. The combination of the handle, its plate B, and pivoted lever C with the spring *f*, confined between the handle and its abutment on the plate, as set forth.

8. The combination of the handle and its plate B with the lever C, pivoted so as to be moved vertically, and having a projection, *i*, occupying a central position in respect to the handle, all substantially as set forth.

9. The combination of the arched handle A, made alike at both ends, and carrying centrally-situated jaws, with the base E, pointed at both ends alike, and having a central cross piece or bar adapted to the jaws, all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARY F. POTTS.

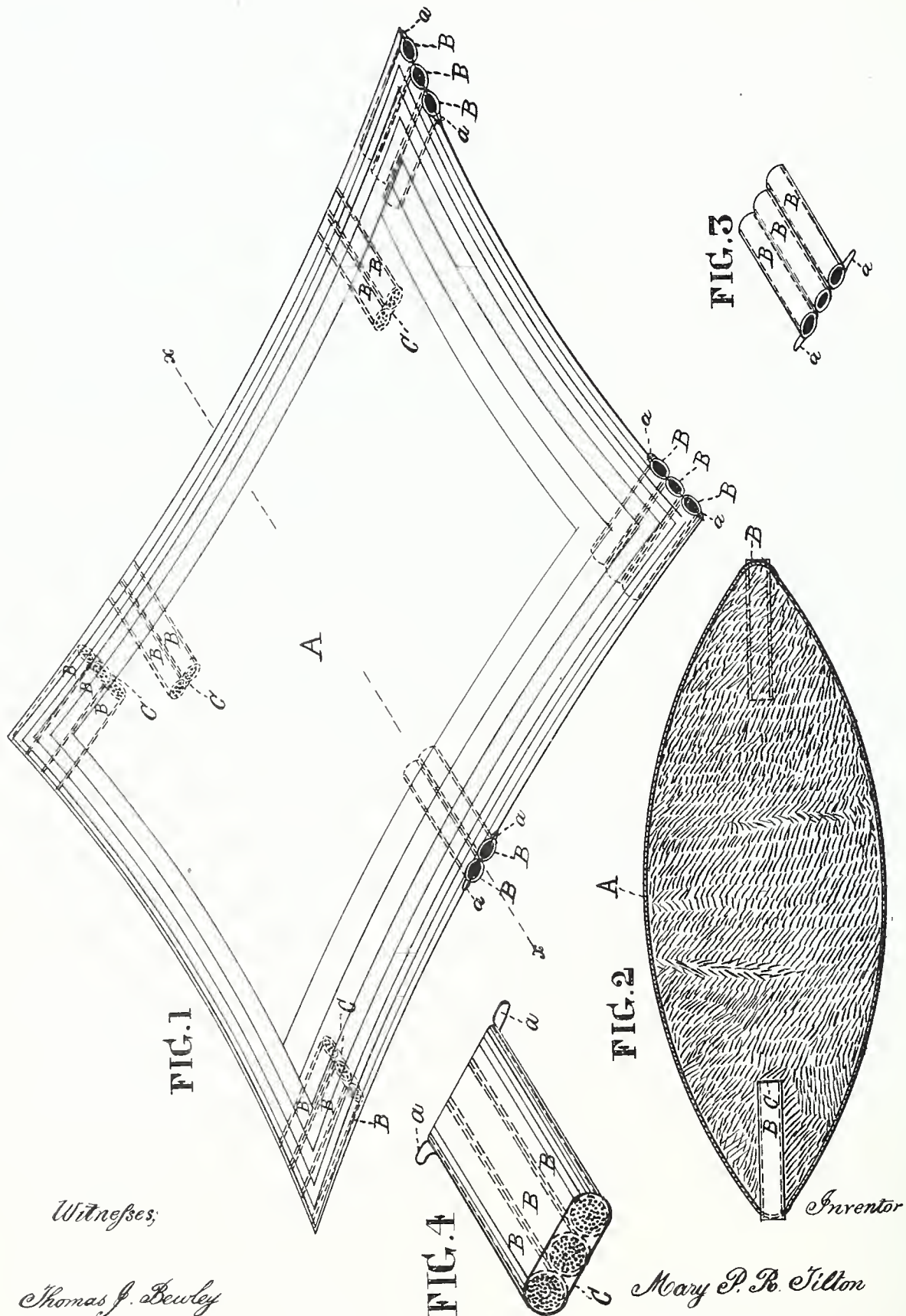
Witnesses:

ALEXANDER PATTERSON,
HARRY SMITH.

M. P. R. TILTON.
Ventilated Pillows, Mattresses, &c.

No. 213,360

Patented Mar. 18, 1879.



Witnesses;

Thomas J. Bewley

Chas. A. Dwy

Mary P. R. Tilton

per Stephen W. Ulick, Attorney

UNITED STATES PATENT OFFICE.

MARY P. R. TILTON, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN VENTILATED PILLOWS, MATTRESSES, &c.

Specification forming part of Letters Patent No. **213,360**, dated March 18, 1879; application filed October 5, 1878.

To all whom it may concern:

Be it known that I, Mrs. MARY P. R. TILTON, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Ventilated Pillows, Mattresses, &c., and cushions of sofas, lounges, chairs, and other seats, of which the following is a specification:

The object of my invention is to give a continuous ventilation to the beds, pillows, mattresses, and cushions of sofas, lounges, chairs, and other seats, so as to prevent the accumulation of confined or impure air, which has hitherto been a source of great injury to health and comfort. The object is, also, to increase the elasticity of such articles; and the nature of the invention consists in the combination of short metallic or other tubes with the edges or the flat surfaces of the beds, &c., for the ingress of fresh or pure air to the interior thereof, and the egress of impure air therefrom, the inner ends of the tubes being provided with wire-gauze or perforated metallic plates, which admit the free passage of air through the tubes, but prevent their being filled or choked up with feathers or other fillings of the beds, &c. In practice I have found that the tubes without such protection soon become unfit for the object for which they are intended.

In the accompanying drawings, Figure 1 is a perspective view of a bed with my improvement. Fig. 2 is a cross-section at the line $x x$ of Fig. 1. Fig. 3 is a perspective view of an assemblage of air-tubes, B. Fig. 4 is a perspective view of a series of three tubes, B, provided with a perforated metallic plate, C.

Like letters of reference in all the figures indicate the same parts.

A represents a bed having my improvement for ventilation. It is made in the usual manner, with the exception of having suitable openings in the edges for the connection of tubes B, which I make in assemblages, as shown in Figs. 1 and 3, in which the tubes are joined together, or are single, and connect them with the bed, as shown in Figs. 1 and 2.

The tubes have a clip, a , at one end, which is bent inward into connection with the bed, as represented.

When three or more tubes are used in connection, the outer tubes only need be provided with the clips. They are prevented slipping outward by stitching, as represented.

Turned annular edges may take the place of the clips, if desired; or any other device may be used for connecting the tubes with the article.

I usually arrange an assemblage of the tubes at each corner of the bed or other article to be ventilated, as represented in Fig. 1, and the intermediate ones any desirable distance apart.

The intermediate tubes at one edge may be arranged in line, respectively, with the like tubes at the opposite edge, or out of line, as shown in Fig. 1, as may be desired.

I make the tubes of sheet metal, or any other suitable material.

To prevent the tubes being choked, so as to prevent the free passage of air, I cover their inner ends with metallic perforated plates C, as shown in Fig. 4; otherwise they would soon be so filled with feathers or other filling of the beds, &c., as to obstruct the passage of air through them.

I have represented the improvement in connection with a bed as an example, but intend it for bolsters, pillows, hair or other mattresses, and all cushioned seats, such as sofas, lounges, chairs, &c., in which the tubes should be arranged as described, or in any other suitable or convenient manner.

The tubes are represented in the drawings in connection with the edges of a bed; but with some other articles it may answer the purpose better to connect them with one or both sides.

It will readily appear that by the use of my improvement beds, &c., are not only thoroughly ventilated, but that the filling in of the air with the feathers or other filling material will greatly increase the elasticity of the article, and also preserve the feathers.

I claim as my invention—

As a new article of manufacture, the herein-described cushion for mattresses and articles of furniture, having the tubes B inserted in the edges thereof, the inner end of the tubes being covered with wire-gauze or perforated plates, substantially as shown and described.

MARY P. R. TILTON.

Witnesses:

THOMAS J. BEWLEY,
STEPHEN USTICK.

M. E. BEASLEY.
Roasting and Baking Pan.

No. 214,084.

Patented April 8, 1879.

Fig. 1.

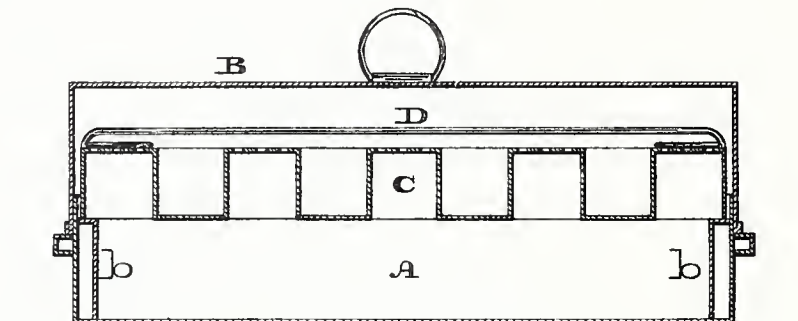


Fig. 2.

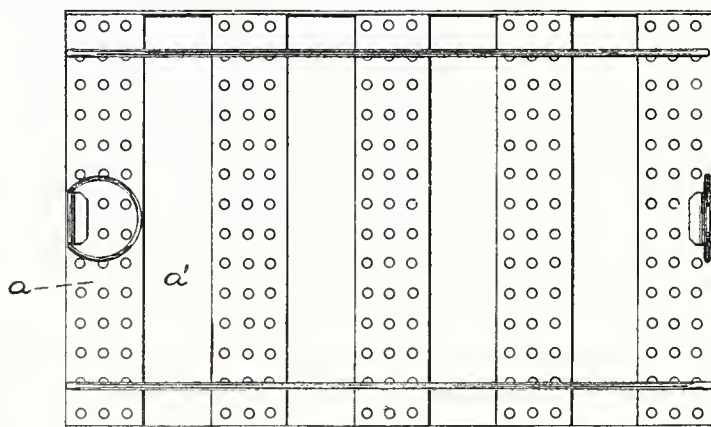


Fig. 3.

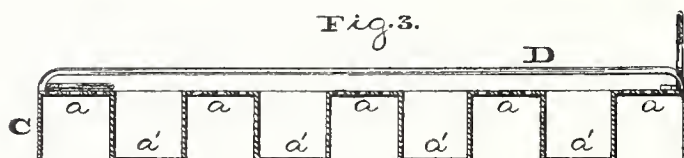
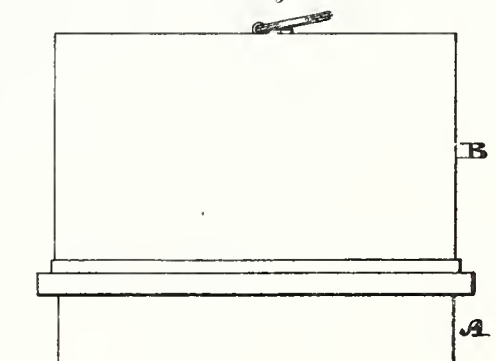


Fig. 4.



Witnesses:

Ap. P. Grant,
W. H. Fischer

Inventor:

Maria E. Beasley,
by John A. Quidersheim
ATTORNEY.

UNITED STATES PATENT OFFICE.

MARIA E. BEASLEY, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN ROASTING AND BAKING PANS.

Specification forming part of Letters Patent No. **214,084**, dated April 8, 1879; application filed September 26, 1878.

To all whom it may concern:

Be it known that I, MARIA E. BEASLEY, of city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Roasting and Baking Pans, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of the pan embodying my invention. Fig. 2 is a top view of the interior thereof. Fig. 3 is a view of a portion of Fig. 1. Fig. 4 is a side view of the pan vertically enlarged.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a combined roasting or baking and steaming pan, the same being formed of a pan and lid with a false bottom, having faces alternately elevated and depressed, the elevated faces being perforated, and a rack adapted to support the meat or other article of food in an elevated position, whereby the under side of the food is subjected to jets of steam, while the top and other sides are exposed to the heat.

The elevated rack prevents clogging of the steam-jets and permits the steam to act forcibly against the food, and then expand under the entire lower surface thereof.

The false bottom is formed of sheet metal, struck up into alternate elevated and depressed faces, and the elevated faces are perforated, so as to provide jets, whereby the steam will be injected against the under side of the meat, &c.

Referring to the drawings, A represents a pan, and B the lid thereof. C represents a false bottom, which is formed of faces *a a'*, alternately elevated and depressed, and rested on ledges *b b* of the pan A.

The elevated faces *a* are perforated, and, if desired, tubes may be employed in lieu of the perforations. Pieces D are secured to the bottom C and elevated therefrom, so as to form a rack, on which the food is supported.

Water is placed in the pan A, and as the steam is formed it rises, and, passing through the perforations of the faces *a a'*, is directed

against the under face of the article of food, which also is subjected to heat on its top and sides, whereby the combined action of steam and heat cooks and roasts or bakes said article, so that it is quickly done, and it becomes tender and juicy, as in the case of meat, even if tough in a raw state.

The depressed faces *a'*, with longitudinal side pieces of the bottom, form receptacles for the drippings, which, heated by water in the pan A, will not dry materially or burn, and provision is made for readily collecting the same.

The steam, directed by the numerous jets or perforations of the elevated faces *a*, is injected forcibly and effectively against the under side of the elevated piece of meat, &c., and it then expands so that the entire under side is subjected to the action of steam, the advantages whereof are evident.

The false bottom is formed of sheet metal struck up into the shape described, so as to be cheap, light, and easily handled; and as the elevated and depressed faces are of the nature of corrugations, said bottom is stiffened and thereby well enabled to endure the weight imposed on it; but it may also be formed of cast metal.

I am aware that it is not new to form a cast-iron pan or griddle of a series of cups, having intermediate spaces and adapted for steaming the articles placed in the cups; but such device is not my invention, and I hereby disclaim the same.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combined roasting or baking and steaming pan, the same consisting of the pan A and lid B, and the false bottom C, formed of the perforated elevated faces *a* and depressed faces *a'*, and provided with the rack D, substantially as and for the purpose set forth.

MARIA E. BEASLEY.

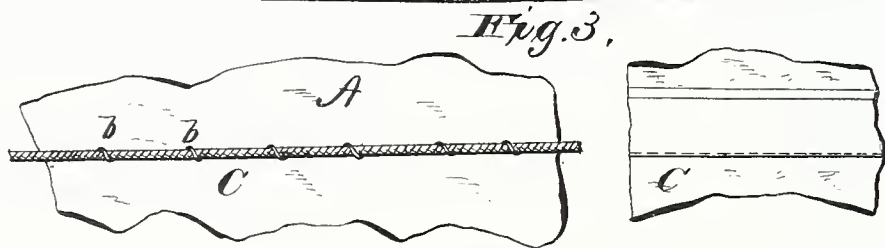
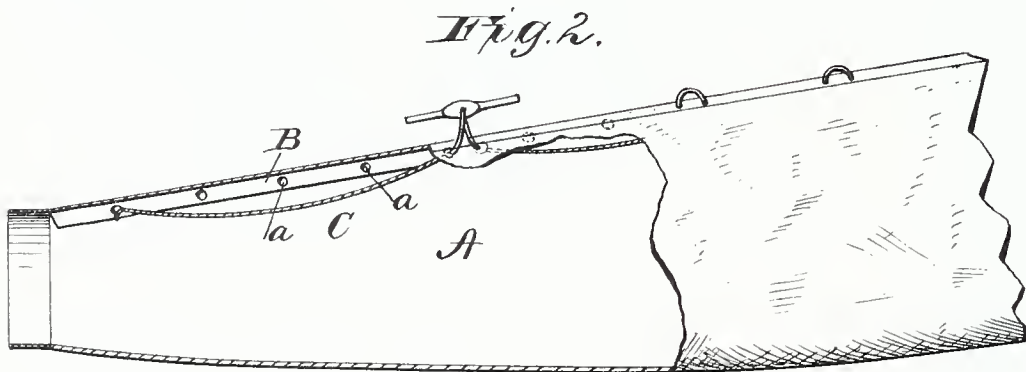
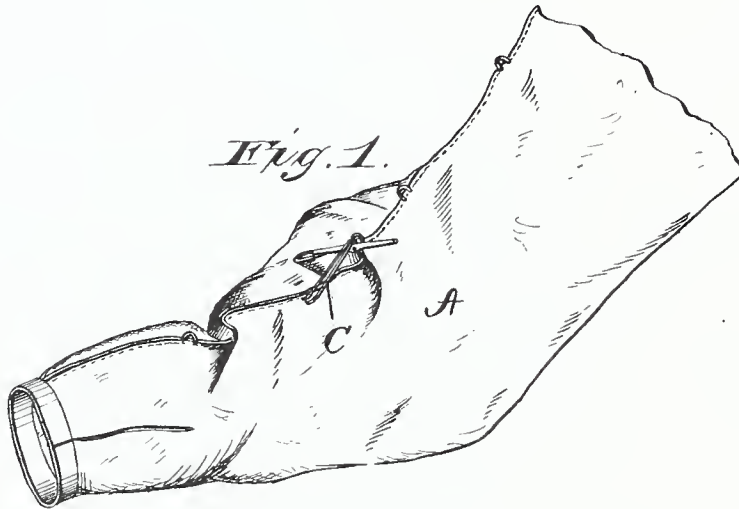
Witnesses:

JOHN A. WIEDERSHEIM,
CHAS. O. BEASLEY.

S. A. FELT.
Sleeve-Adjuster.

No. 222,262.

Patented Dec. 2, 1879.



WITNESSES
A. L. Curand
J. J. McCarthy

INVENTOR
S. A. Felt
Alexander Mason
ATTORNEYS

UNITED STATES PATENT OFFICE.

SARAH A. FELT, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SLEEVE-ADJUSTERS.

Specification forming part of Letters Patent No. **222,262**, dated December 2, 1879; application filed June 7, 1879.

To all whom it may concern:

Be it known that I, SARAH A. FELT, of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Sleeve-Adjusters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to a device for adjusting the length of the sleeves of a shirt or similar garment at the will of the wearer; and it consists of a draw string, cord, or tape passing through holes, loops, or rings in or attached to the sleeve, or in combination with a shirred section with the sleeve, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a perspective view of a sleeve embodying my invention, showing the sleeve drawn up. Fig. 2 is a side view of the same, showing the sleeve extended and partly open to show the inside. Fig. 3 shows another form of my invention.

A represents a sleeve of a shirt or similar garment provided on the inside along the inner seam with a strip, B, in which is a series of eyelets, *a a*. Through these eyelets is passed a draw-string, C, which may be carried out to the outside of the sleeve, so as to be pulled from the outside; or it may remain on the inside.

The eyelets may be attached in the sleeve itself, if desired; or loops *b b* may be arranged

either inside or outside of the sleeve, with the draw-string passing through the loops.

In some cases a shirred section may be used in combination with the draw-string.

The object of the invention is to improve the appearance of the sleeve by adjusting its length to preserve the cleanliness of the wrist-band, cuffs, or lower ends thereof, and to promote the comfort of the wearer.

The draw-string C is provided with a small cross-bar or equivalent device, for the purpose of shortening the sleeve to any extent desired and fastening the string.

I am aware that a device for adjusting the length of the sleeves of shirts and other undergarments by means of a tab or strap, combined with the cuff-band or placket and the body of the sleeve, is not new, and I do not claim such as my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A sleeve-adjuster consisting of a string, cord, or tape having one end connected securely to the sleeve above the elbow, and one below the elbow, the center of said string passing through central eyelets, and provided with a cross-bar, anchor, or hook to engage in loops formed or secured upon the upper portion of the sleeve, as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of May, 1879.

SARAH A. FELT.

Witnesses:

J. J. MCCARTHY,
JOS. R. TINDALL.

C. BEGGS.
Car Seat.

No. 229,944.

Patented July 13, 1880.

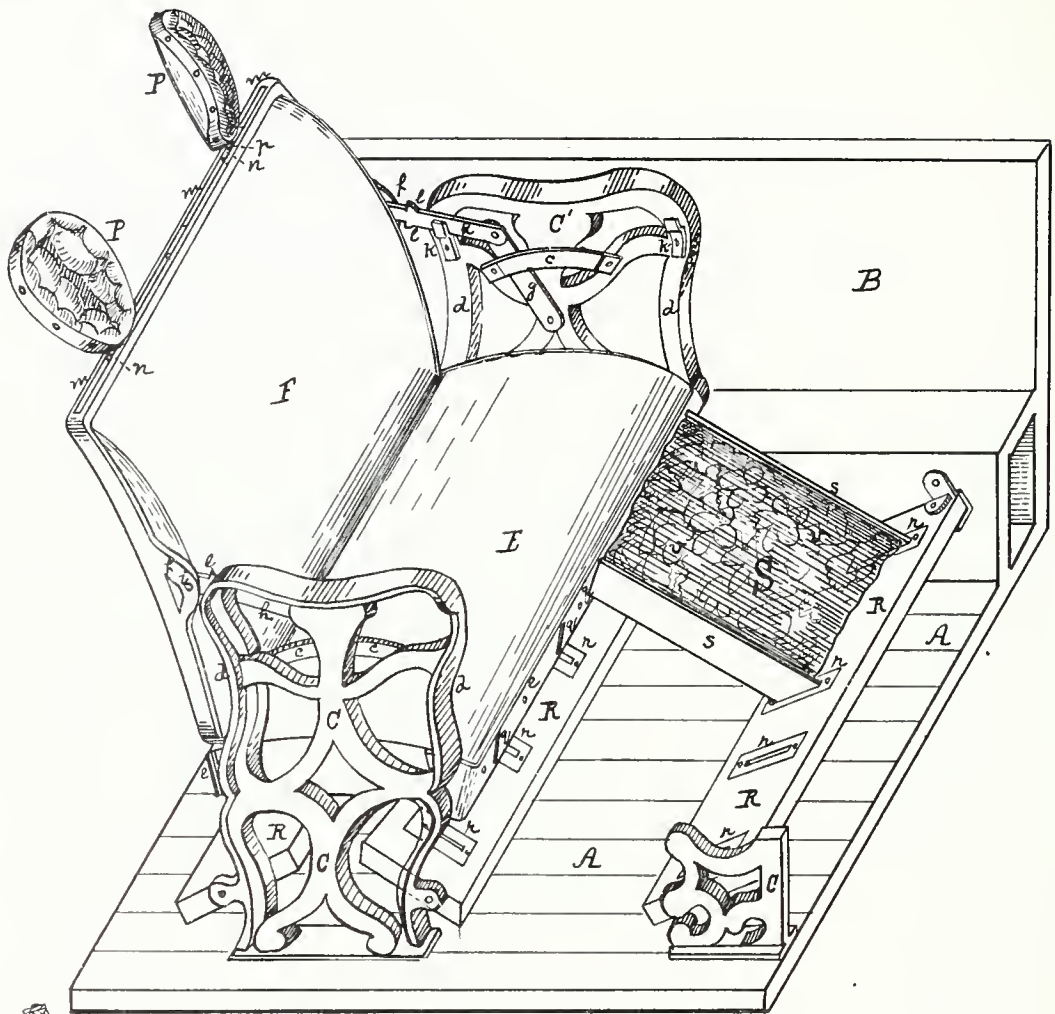


FIG. 1.

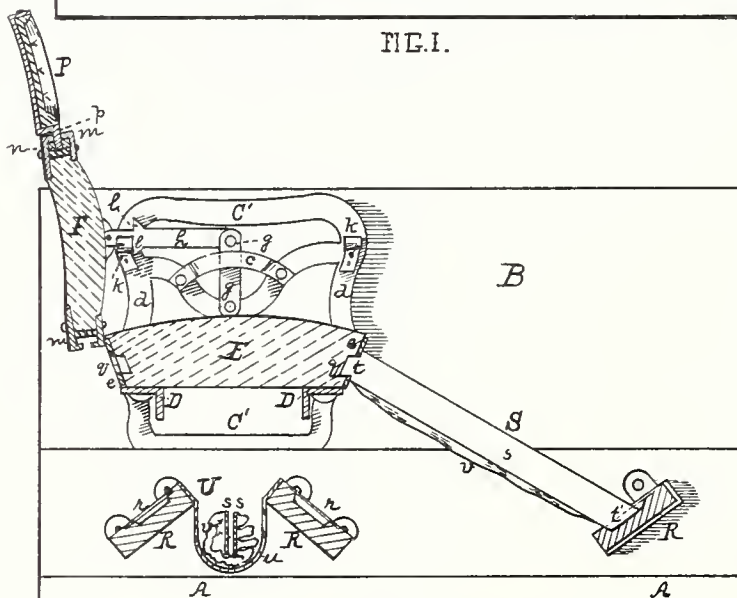


FIG. 2.

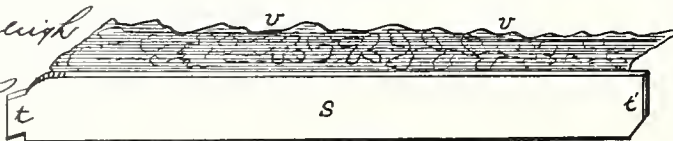


FIG. 3.

Witnesses.

Chas. S. Smith
H. B. Barlow

Inventor.

Christina Beggs
by James L. Ray,
Attorney

UNITED STATES PATENT OFFICE.

CHRISTINA BEGGS, OF ALLEGHENY, PENNSYLVANIA.

CAR-SEAT.

SPECIFICATION forming part of Letters Patent No. 229,944, dated July 13, 1880.

Application filed February 26, 1880.

To all whom it may concern:

Be it known that I, CHRISTINA BEGGS, of Allegheny city, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Adjustable Car Seats and Rests; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of my improved car-seat. Fig. 2 is a longitudinal vertical section of the same, and Fig. 3 is a detached view of part of the limb-support.

Like letters of reference indicate like parts in each.

My invention relates to the seats used in the passenger-cars of railroads for day-traveling. Its particular purpose is to adapt the reversible seats (or seats arranged to be reversed so as to face in the direction in which the car is traveling) as reeling-in-seats for sleeping and resting purposes.

It consists, first, in a certain arrangement of the rods or levers attaching the seat-back to the arms thereof, whereby the seat may be secured either in an upright or reclining position when facing in either direction; second, in providing the seat-back with a removable head-rest which is adapted to slide along the top of the seat to suit the comfort of the user; third, in removable limb-supports extending from the car-seat to the foot-rest under the adjacent seat; and, finally, in details of construction hereinafter set forth.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

In the drawings, A is the floor of the passenger-car, and B is the side wall, which are of the usual construction. C C' are the side supports and arms, and D the seat-frame, of the usual car-seat, the outer support and arm, C, being secured to the car-floor A, and the inner arm to the side wall, B, and the seat-frame or cross-bars D extending between them.

E is the usual cushioned car-seat, which is supported on the frame D and secured thereto in any convenient manner, and F is the

seat-back, formed and ensheathed in the usual manner.

On the inner side of each arm C C' is the bracket c, which bracket is arranged in the center of the arm near the top, and extends out a sufficient distance to permit the rod or bar g to move easily within it, the ends of the bracket limiting the motion of the bar.

The bar g is pivoted to the center of the arm at a point below the bracket and about opposite the seat, and extends a short distance above the bracket, which holds it against the arm E and guides its motion, as hereinafter described.

Pivoted to the top of the bars g are the rods h, which are pivoted to the center of the seat-back F, or the short arms f, extending out therefrom at i.

On the inner side of the uprights d d' of the chair, near the top, are the stationary lips k, within which the rods h rest, and at certain points on the rods h are the lugs l, one on the top and one on the bottom of the rod, opposite each other, which lugs catch against the lips k when the back is to be secured in the usual upright position, and prevent the rods from slipping farther down along the lips k. When, however, it is desired to place the back F in an inclined or reclining position, the lugs l are lifted past the lips and the rods h slip along the lips until the bars g, moving within the brackets k, come against the ends thereof, which thereby limit the motion of the rod h and bear any weight against the back. As the back F is pivoted to the rod h, it naturally assumes an inclined position and forms the reclining-back. As the rods h are pivoted in the center of the ends of the back and are provided with lugs on both sides, the back can be reversed and secured in either an upright or inclined position, as above set forth, on either side of the car-seat, the rods h swinging on the bars g and catching on the lips k on the opposite uprights.

Extending along the top and bottom edges of the back F are the slotted rods m, formed of metal, the lips or edges of which extend over and hold within the slots one or more slides, n, in such manner that the slides can be moved from one end of the slot to the other. In the

center of these slides *n* are formed tapped or threaded holes, into which are screwed the head-rests *P*. These head-rests *P* are cushioned, and are preferably made hollow to give a softer and a more comfortable support for the head, and are provided at the base with tapped rods *p*, which screw into the tapped holes in the slides *n*. The head-rests *P* can thus be slid to any desired part of the chair and turned to any desired angle to suit the convenience of the user. When the seat is to be reversed the head-rests are unscrewed, and after the reversal of the seat screwed into slides in the other slotted rod, which is then turned to the top of the back.

The head-rests *P* may be secured to the slides *n* by other means than screwing, and may also be capable of revolution on the stem fitting into the slide, independently of the screw.

Extending along both sides of the car-seat *E* are the plates *e*, and at suitable distances in the plates are formed the transverse slots *q*. Underneath each seat are the usual stationary foot-rests *R*, one facing in each direction, to suit the user on the reversal of the seat. The surfaces of the foot-rests are inclined, and at suitable intervals on said surface are the transverse slots *r*, extending through the seat, the position of the slots on the foot-rests corresponding to those on the sides of the seat. If the seat is double, there are four slots on both the foot-rests and seat-sides, to accommodate two limb-supports, *S*, as hereinafter set forth, one for each seat. The limb-supports *S* are formed of two side rods, *s*, and a cover, *v*, of canvas, carpet, or other fabric, attached to the side rods and stretched between them. At the upper ends of the side rods are the flattened lugs or projections *t*, fitting and resting in the transverse slots *q* on the side of the seat, and at the base of said rods are the flattened lugs *t'*, fitting and resting in the slots *r* on the foot-rest under the adjacent seat, the limb-support *S* being thus secured in an inclined position between the seat and foot-rest. It may, in some cases, be necessary to bend the side rods, so as to support the canvas or carpets stretched between them on a line with the seat.

Underneath the car-seat, and between the foot-rests *R*, is formed the rack *U*, for the reception of the limb-supports when not in use. It is formed of two or more bands, *u*, the ends of which are attached to the upper ends of the foot-rests and extend down between them, forming the hollow rack *U*. The limb-support is removed by simply lifting the lugs *t t'* out of the slots *q r*, when it can be rolled up and placed in the rack *U* under the seat, being entirely out of the way.

When in use my invention operates in the following manner: When it is desired to arrange the seats for day-traveling the back is swung so that the lugs *l* on the pivotal rods *h* catch against the lips *k* on the arm-frame and

hold the back in an upright position. The head-rest *P* may either be secured to the sides *n* and used by the traveler, or be removed and placed in the rack *U* under the seat. When the seat is to be reversed the head-rests *P* are first removed, the back swung over on the pivotal rods *g h*, in the usual manner, the lugs *l* on the other side of the bar catching in the lips *k* on the other side of the arm and securing it in the usual upright position, and the head-rests secured on the side of the back which is turned uppermost. When the seat is to be arranged as a reclining-seat for sleeping or resting the back *F* is raised slightly until the lugs *l* pass the lips *k*, when the rods *h* will slide along said lips until the bars *g*, coming against the ends of the brackets *c*, limit the motion of the bar, and the back will naturally move on its pivot *i* and assume the reclining position. The limb-supports are then removed from the racks *U* and secured in place by means of the flattened lugs *t t'*, fitting and resting in the transverse slots in the seat-side and foot-rest, forming an inclined support, which, being made of a yielding material, will accommodate itself to the position of the user and form an exceedingly comfortable rest or support for the limbs.

The head-rest *P* can be slid along the top of the reclining-back and turned so as to suit the comfort of the traveler, and the whole seat, as above arranged, will give an exceedingly restful and comfortable position in which to travel, and one which is preferred by many to the sleeping-cars so largely in use.

The seat can be arranged for night-traveling in a few minutes, with very little trouble and by any ordinary traveler, without the aid of an employé of the road. It can be replaced in its ordinary upright position for day-traveling in as short a time and with as little trouble, and the parts take up no more room than the ordinary seats of a day-car.

The inclination at which the back is to be placed can be determined by the length of the rods *g* and *h* or brackets *c*, and where there is sufficient room in the car it can be arranged to extend back from the seat almost horizontally. The foot-rest can also be made to slide in guides to be raised nearer the height of the seat, and thus raise the position of the limb-support. In the ordinary day-coach, however, there is not room for arranging the seat in this way.

What I claim as my invention is—

1. In reversible car-seats, the combination, with the back *F* and arms *C*, having the lips *k*, of the bars *g* and rods *h*, pivoted together and to the arms and back, respectively, and the brackets *c*, rigidly attached to the arms *C*, for limiting the motion of the bars *g*, substantially as set forth.

2. In reversible car-seats, the combination of the back *F*, the arms *C*, having the brackets *c* and lips *k*, the pivoted rod *h*, having the

lugs *l*, and the pivoted bar *g*, substantially as and for the purposes set forth.

3. In combination with the seat-back *F*, the slotted rod *m*, the slide *n*, and removable head-
5 rest *P*, substantially as and for the purposes set forth.

4. In combination with the seat *E*, having the transverse slots *q*, and the foot-rest *R*, having the transverse slots *r*, the removable
10 limb-supports *S*, formed of the side rods, *s*,

secured to the cover *v*, and provided with the lugs *t t'*, for fitting into said slots, substantially as and for the purposes set forth.

In testimony whereof I, the said CHRISTINA BEGGS, have hereunto set my hand.

CHRISTINA BEGGS.

Witnesses:

JAMES I. KAY,
E. W. LYON.

E. E. TASSEY.
Siphon Propeller Pump.

No. 230,723.

Patented Aug. 3, 1880.

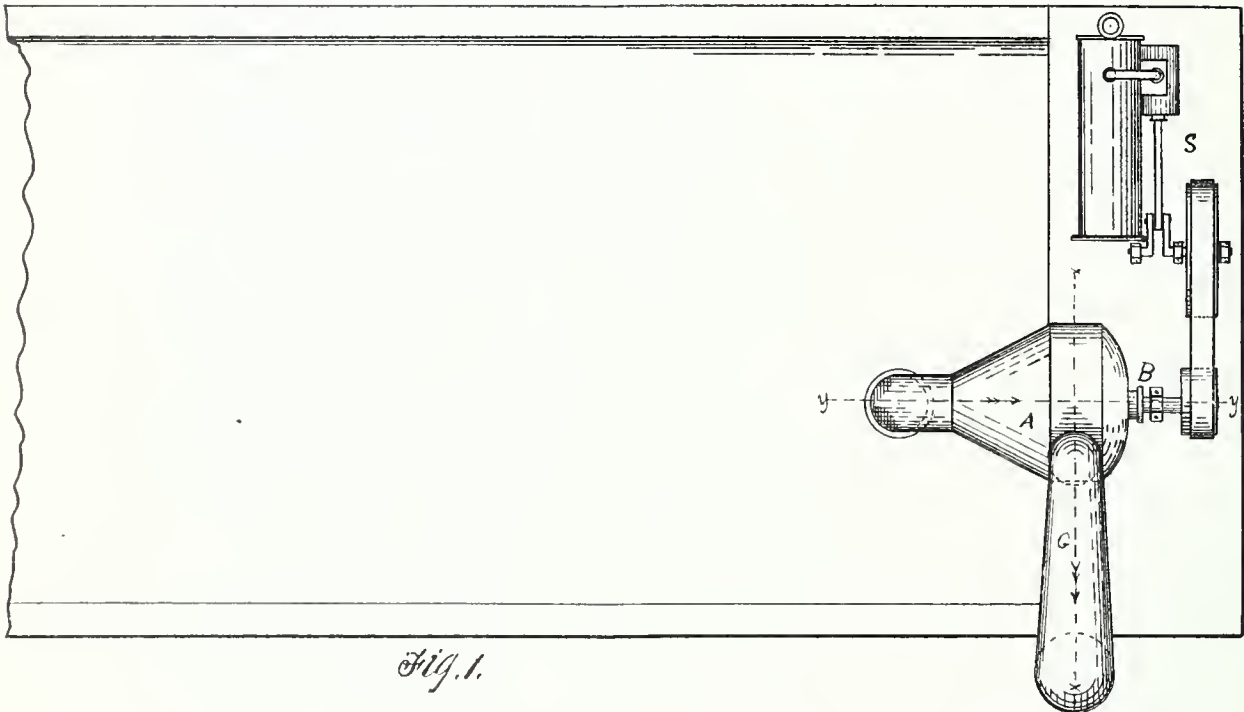


Fig. 1.

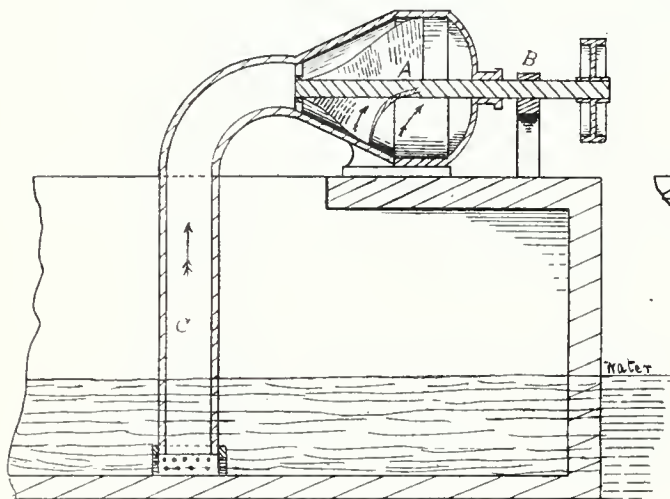


Fig. 2.

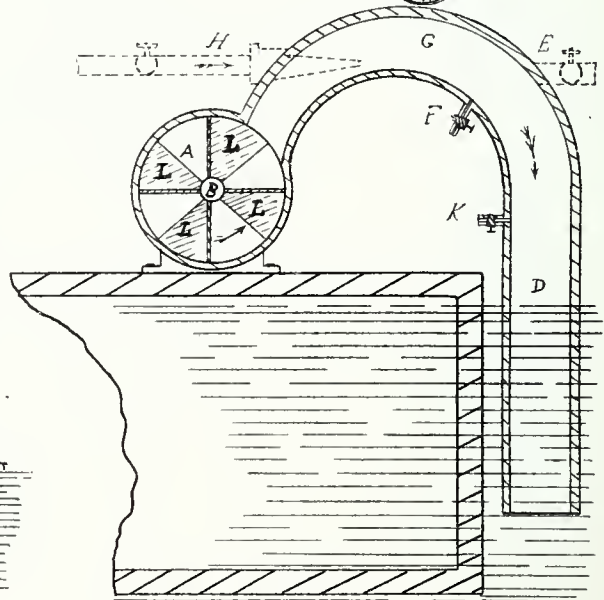


Fig. 3.

Witnesses.

John Howland
Oliver H. Clark

Inventor

Emily E. Tasse

UNITED STATES PATENT OFFICE.

EMILY E. TASSEY, OF McKEESPORT, PENNSYLVANIA.

SIPHON PROPELLER-PUMP.

SPECIFICATION forming part of Letters Patent No. 230,723, dated August 3, 1880.

Application filed June 27, 1879.

To all whom it may concern :

Be it known that I, EMILY E. TASSEY, of the borough of McKeesport, county of Allegheny, State of Pennsylvania, have invented a new Siphon Propeller-Pump; and I do hereby declare the following specification and drawings are sufficient to enable any person skilled in the art to which it appertains to make and use my said invention.

The object of my invention is to provide means for discharging large quantities of water—as from a coffer-dam or dry-dock—into the river.

It consists of a curved tube and draft-tube with regulating-valves, communicating with a propeller-pump or other mechanical device for raising water, which combination preserves and utilizes the velocity of the water in the pump by permitting it to discharge in an ascending and widening curved siphon-tube, and then descend in a draft-tube containing a greater area of water than the suction-pipe. The water being permitted to ascend and then fall by natural gravity added to the impulse of the pump, it fills the place of the longer arm of a natural siphon and becomes a powerful aid in raising the water in the suction-pipe.

As the higher head of a siphon gives greater velocity, so the velocity of the water in the pump represents the higher head.

The height to which the curved tube may ascend must vary according to the conditions in which it is placed; but no advantage can be gained by carrying it higher than thirty feet, the height to which water is sustained by atmospheric pressure.

Referring to the drawings, Figure 1 is a plan or downward view of the dry-dock, steam-engine, centrifugal pump, and curved tube. Fig. 2 is the section indicated on Fig. 1 by the dotted line *y y*. Fig. 3 is the section indicated on Fig. 1 by the dotted line *x x*. Fig. 2 shows the suction-pipe. Fig. 3 shows the draft-tube at right angles to the former.

Similar letters indicate in each of the figures like parts.

S is the steam-engine or other power employed to rotate the centrifugal pump A by means of the shaft B. L L are the spiral propeller-blades, filling and working in the conical casing. C is the suction-pipe. D is the draft-tube, and G is the ascending widening curved siphon-tube, both of which tubes are

H represents a jet of compressed air or steam as is used in the steam siphon-pump. K and F are valves to allow the escape of the air in priming, and also to be opened if the draft becomes too strong when the dock is nearly emptied.

The draft-tube D is made larger than the suction-pipe, to avoid friction, and also because the increased area has greater power of suction.

The conical casing is open throughout, except the shaft and propeller-blades, to allow free course for the water and avoid friction.

Without the rotary pump, and used as what is commonly called a "steam siphon-pump," a jet of steam may be introduced into the curved tube, as at H, Fig. 3, the valve E being open to permit its free course until the pump is primed and the draft begins, when it should be closed. The steam condenses in the draft-tube and, creating vacuum, becomes again a power in lifting the water in the suction-pipe.

The same combination being used and applied to a boat or ship, the draft-tube may descend within the ship and terminate in the bottom, a valve being used to prevent the entrance of the external water.

I claim—

1. A water-elevator having an ascending siphon discharge-tube the area of which increases outwardly, and provided with regulating-valves, substantially as set forth.

2. A water-elevator having an ascending siphon discharge-tube, in combination with a draft-tube of greater area than the suction, as and for the purpose set forth.

3. A water-elevator having an ascending siphon discharge-tube the area of which increases outward, in combination with a draft-tube, substantially as described.

4. A water-elevator having an ascending siphon discharge-tube the area of which increases outward, and provided with regulating-valves, in combination with a draft-tube, substantially as set forth.

5. The combination, with an ascending siphon discharge-tube provided with a suitable priming-valve, of a steam-jet, substantially as described, and for the purpose set forth.

EMILY E. TASSEY.

Witnesses :

JOHN ROWLAND,
OLIVER H. CLARK.

M. E. BEASLEY.
Life-Raft.

No. 226,264.

Patented April 6, 1880.

Fig. 1.

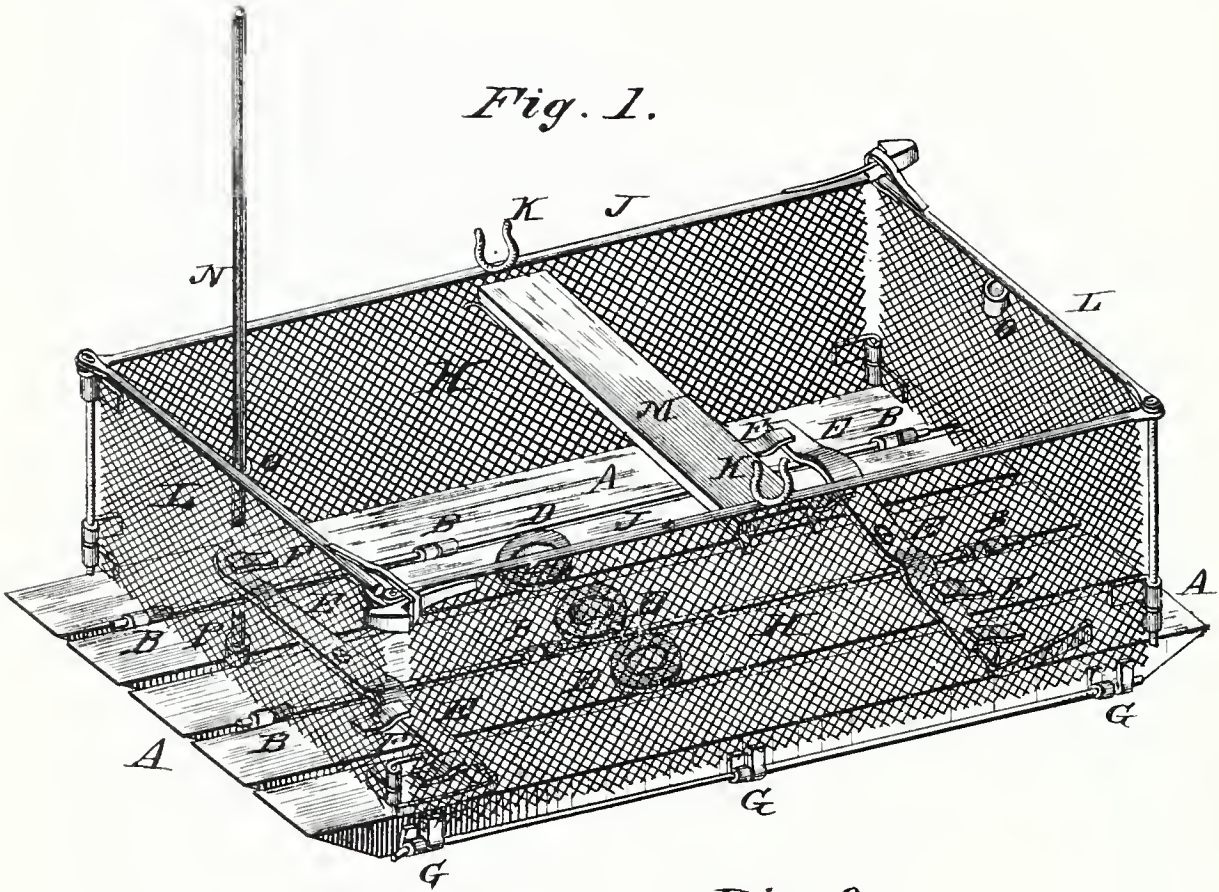


Fig. 2.

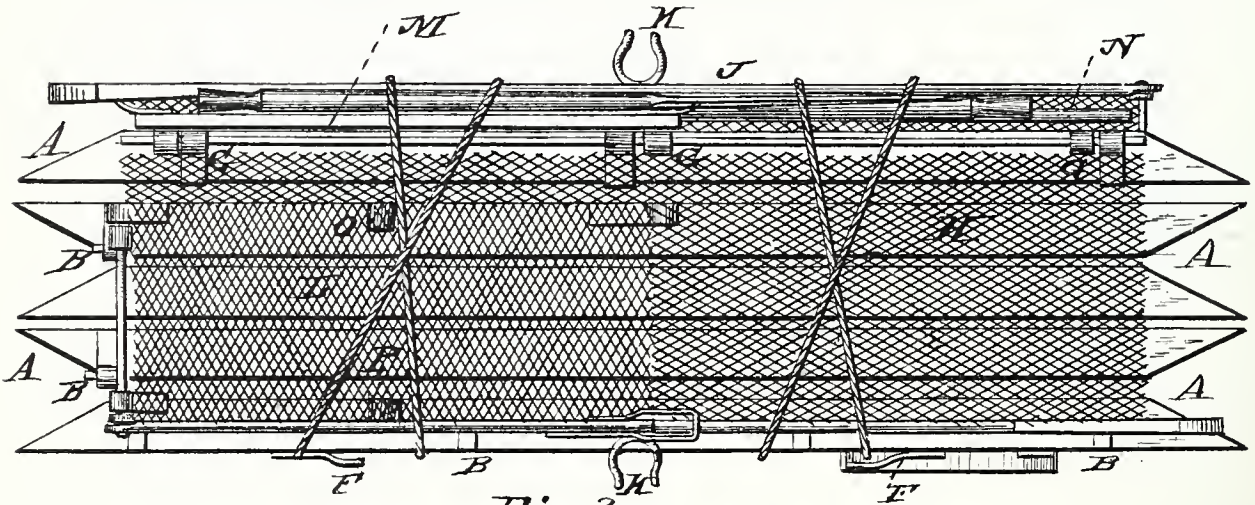
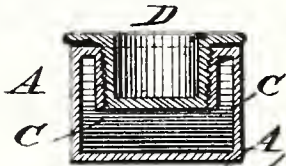


Fig. 3.



Witnesses:

*J. C. Distreich
Jno. A. Stockman.*

Her

Per *M. E. Beasley* Attorney

UNITED STATES PATENT OFFICE.

MARIA E. BEASLEY, OF PHILADELPHIA, PENNSYLVANIA.

LIFE-RAFT.

SPECIFICATION forming part of Letters Patent No. 226,264, dated April 6, 1880.

Application filed October 13, 1879.

To all whom it may concern:

Be it known that I, MARIA E. BEASLEY, of the city and county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Life-Raft, for the purpose of saving life in case of shipwreck; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable others skilled in the art to make and use the said invention.

The object of my invention is to furnish a fire-proof, compact, safe, and readily-launched raft, which can be made instantly available when required.

The nature of my invention consists in, first, a system of hollow metallic rectangular floats having the ends beveled on the under side and united in parallel position by hinges, so that they may be folded together when stowed or spread out flat when in use, and in a series of bars and hooks combined with said floats, so that they may be held in flat position when in use; second, in combining, with said system of floats, bars, and hooks, a railing or guard, hinged thereto, so as to fold compactly parallel with the floats when stored, and when in use fastened at the corners, so as to inclose the deck or surface of the raft and furnish support for the thwarts or seats and rowlocks or thole-pins, furnishing fulcrums for the oars in rowing; third, in combining, with the raft formed of parallel prismatic floats and guard-rails, thwarts, and rowlocks, or equivalent oar-supports, provision-receptacles which can be kept continuously ready for any emergency of shipwreck.

I will now proceed to particularly describe the construction and operation of my invention, referring in so doing to the drawings annexed and the letters of reference marked thereon.

Figure 1 shows the invention, in perspective, as when in use. Fig. 2 shows the invention as folded for stowing; Fig. 3, a float in section in middle transverse.

A are flat rectangular metallic floats having the lower side of the ends beveled. These are fastened to each other by hinges B. In some or all of these floats A are formed cavities or chambers C, provided with a stopper, D, holding provisions. Bars E are pivoted upon the upper side of the float, and engage in

hooks F, fastened firmly to the upper sides of the other floats, and when engaged in the hooks F the bars E hold the floats in the same flat plane, and when turned in parallel position with the floats A the bars E make no impediment in the folding of the raft, the positions of the pins of the hinges B being in such relation to the upper surfaces of the floats A that a space adequate to receive the bars E and hooks F is provided when the floats A are folded. Upon the sides of the outer floats are hinges G, attaching a grated railing, H, provided with a strong upper rail, J, with rowlocks K thereon. At the opposite end of each of the railings H are hinged gates L, made also of gratings, which, fastening to the other end of the opposite railing or grating H, form a complete rectangular inclosure. When folded, the railings H and gates L lie in parallel position with the floats A. Seats or thwarts M are placed across the raft, resting when in use on the meshes of the gratings H, and when stowed are placed parallel with the floats A and gratings H.

A flag-staff, N, is placed in rings O and P in one of the gates L. The flag-staff N, together with oars and a boat-hook, is placed parallel with the thwarts when the raft is stored.

The provision-receptacles being air-tight, provisions can be safely stored therein without deteriorating from drying up or by enervation by vermin.

I am aware that life-rafts have been made by flexibly connecting hollow tubes. Such rafts do not afford a flat deck, and are objectionable for that reason, and are hereby disclaimed.

Also, that life-rafts consisting of two floats adjustable at variable distances. This, also, I disclaim.

Also, that sectional folding life rafts in which floats hinged to and folding around a central keel have been made, which I disclaim as any part of my invention, and are objectionable on account of their bulk when folded and for want of stiffness when extended, not having, when extended, as in my invention, the flat surfaces of the sections so presented to each other as to prevent the accidental closing of the raft by force applied laterally.

Having described my invention and the mode of making and operating the same, what I claim

therein as new and of my own original and first invention is—

5 1. The hollow rectangular metallic floats united by hinges, so as to present parallel flat surfaces of the floats to each other when either folded or extended, and with beveled ends adapted to ride over waves and to be folded compactly when stored, as and for the purpose set forth.

10 2. In combination with the prismatic metallic floats hinged to each other, the railing, grating, or guards surrounding the same, hinged thereto, and operating as a braeing therefor

and a support for the thwarts and rowlocks or thole-pins, as and for the purpose set forth. 15

3. A life-saving raft consisting of prismatic metallic floats with beveled ends united by hinges and stiffened by cross-bars and hooks, and provided with a guard-railing, thwarts, and thole-pins or rowlocks, and provision-reep- 20 tacles, as and for the purpose set forth.

M. E. BEASLEY.

Witnesses:

ALEX. H. SIEGEL,

J. DANIEL EBY.

(No Model.)

E. GALLAHER.
Steam Cooker.

No. 232,701.

Patented Sept. 28, 1880.

Fig. 1.

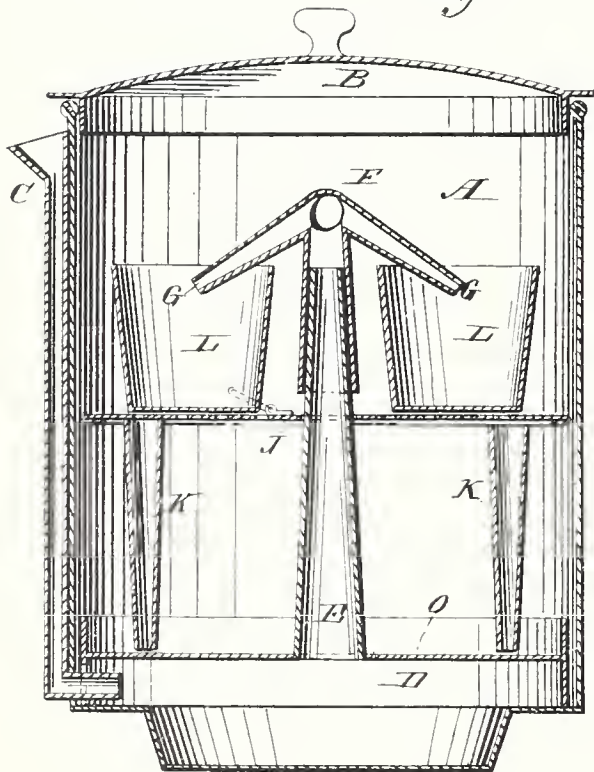


Fig. 3.

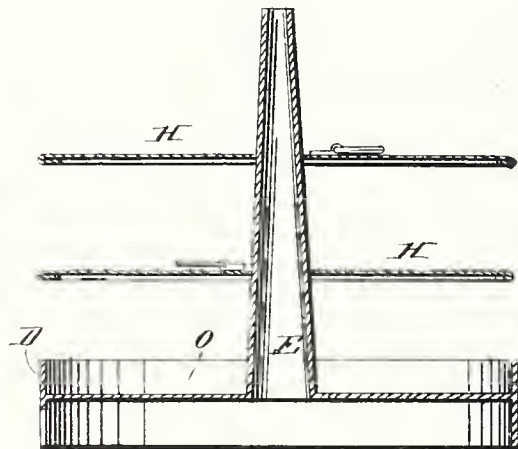


Fig. 2.

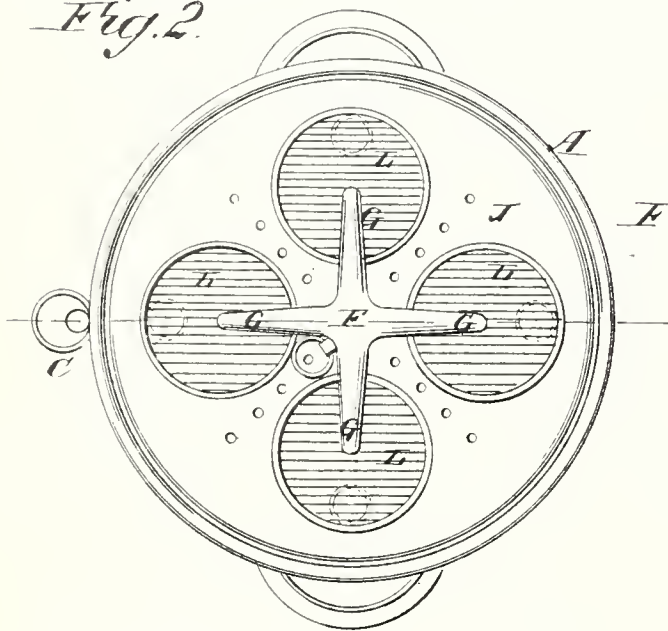


Fig. 4.

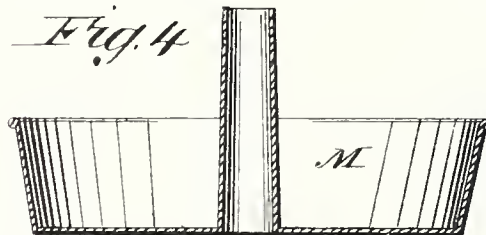
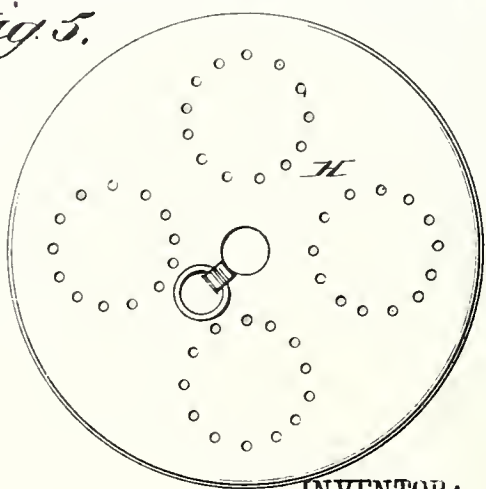


Fig. 5.



WITNESSES:

Francis M. Artole,
C. Sedgwick

INVENTOR:

E. Gallaher

BY

Mum Ho

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ELIZABETH GALLAHER, OF BRADFORD, PENNSYLVANIA.

STEAM-COOKER.

SPECIFICATION forming part of Letters Patent No. 232,701, dated September 28, 1880.

Application filed May 31, 1880. (No model.)

To all whom it may concern:

Be it known that I, ELIZABETH GALLAHER, of Bradford, McKean county, Pennsylvania, have invented a new and Improved Steam-Cooker, of which the following is a specification.

The object of my invention is to provide a new and improved steam-cooker which is simple in construction, and in which any kind of food can be cooked thoroughly and rapidly.

The invention will first be described in connection with the drawings, and then pointed out in the claim.

In the accompanying drawings, Figure 1 is a cross-sectional elevation of my improved steam-cooker. Fig. 2 is a plan view of the same, the lid being removed. Fig. 3 is a cross-sectional elevation of the bottom disk, with the central steam-tube carrying the perforated supporting-disks. Fig. 4 is a cross-sectional elevation of a circular baking-pan to be used in my improved steam-cooker, and Fig. 5 is a plan view of the perforated supporting-disks carried by the central steam-tube.

Similar letters of reference indicate corresponding parts.

A cylindrical vessel, A, is provided with a lid, B, and a tube, C, which extends to the bottom, so that the vessel can be conveniently filled with water. A disk, O, is provided with an annular flange, D, resting on the bottom of the vessel A, and with a central steam-tube, E, extending almost to the top of the vessel. A detachable head or top piece, F, is mounted on the top of the tube E, and is provided with a series of smaller tubes, G G, which are inclined downward, and deliver the steam rising in the tube E upon the articles to be cooked, which are placed upon perforated supporting-disks H, carried by the tube E, or upon a perforated disk, J, provided with four legs, K.

The food may be placed in cups or cases L, resting upon the disks, or may be placed in the circular pan M.

The within-described steam-cooker is used as follows: The top F of the tube E is first removed, and then one or more disks, H, are placed upon the tube E, or the disk J, with the legs or supports K, is placed upon the same, and the articles to be cooked or the cans L containing them are placed upon these disks in such a manner that the steam issuing from the ends of the tubes G is delivered into or upon the cans or cups L. If soft bread or biscuit are to be baked, the dough is placed in the circular pan M, the pan is placed upon the tube E, and the top F is then placed upon the tube. If it is desired to prevent water or grease from dripping from above, the cans or cups L must be placed in the circular pan M.

In canning goods, the bottles or cans to receive them are placed upon the disk J, provided with four legs, so that the said cans are directly below the ends of the tubes G.

The steam-cooker may be used in various other ways, and always cooks very rapidly and thoroughly.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The vessel A, having lid B, water-tube C, flanged disk D, with central tube, E, the head F, with downwardly-inclined tubes G, and the perforated disk J, with legs K, as shown and described.

ELIZABETH GALLAHER.

Witnesses:

G. H. BELL,
HEPBURN MCCLURE.

(No Model.)

E. GALLAHER.
Steam Cooker.

No. 232,701.

Patented Sept. 28, 1880.

Fig. 1.

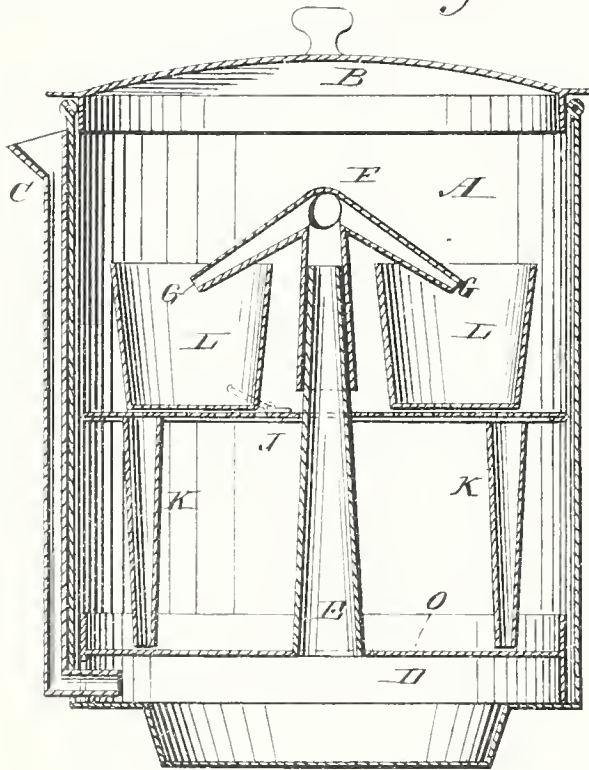


Fig. 3.

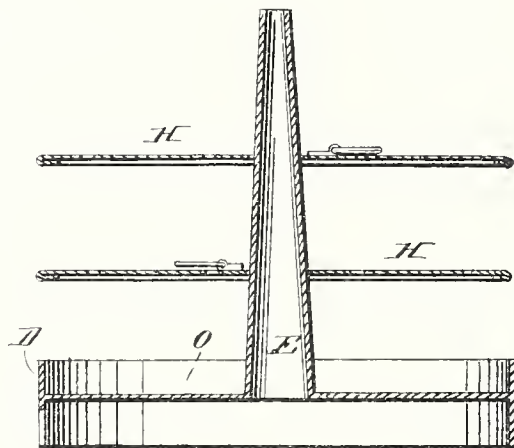


Fig. 2.

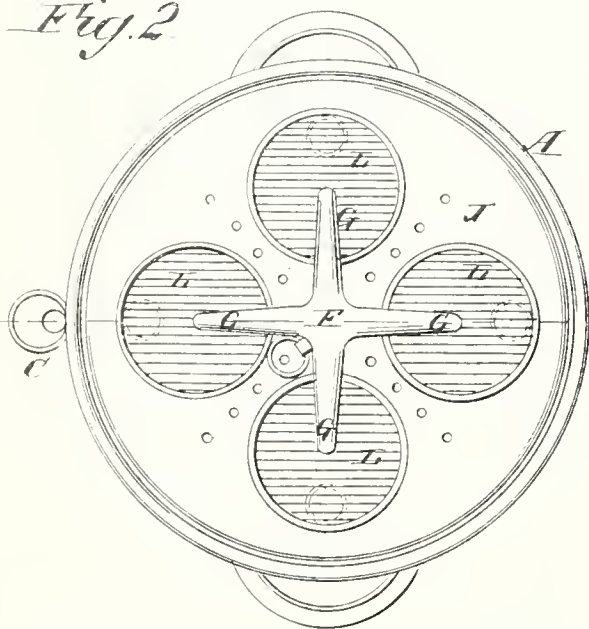


Fig. 4.

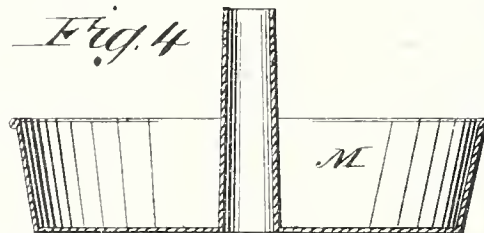
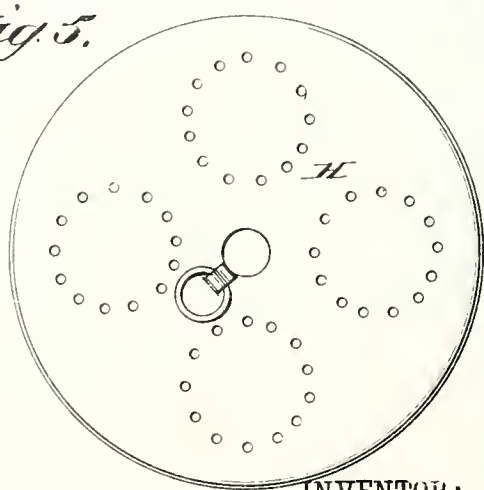


Fig. 5.



WITNESSES:

Francis M. Little,
C. Sedgwick

INVENTOR:

E. Gallaher
BY *Munn Ho*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ELIZABETH GALLAHER, OF BRADFORD, PENNSYLVANIA.

STEAM-COOKER.

SPECIFICATION forming part of Letters Patent No. 232,701, dated September 28, 1880.

Application filed May 31, 1880. (No model.)

To all whom it may concern:

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Similar letters of reference indicate corresponding parts.

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The food may be placed in cups or cases L, resting upon the disks, or may be placed in the circular pan M.

The within-described steam-cooker is used as follows: The top F of the tube E is first removed, and then one or more disks, H, are placed upon the tube E, or the disk J, with the legs or supports K, is placed upon the same, and the articles to be cooked or the cans L containing them are placed upon these disks in such a manner that the steam issuing from the ends of the tubes G is delivered into or upon the cans or cups L. If soft bread or biscuit are to be baked, the dough is placed in the circular pan M, the pan is placed upon the tube E, and the top F is then placed upon the tube. If it is desired to prevent water or grease from dripping from above, the cans or cups L must be placed in the circular pan M.

In canning goods, the bottles or cans to receive them are placed upon the disk J, provided with four legs, so that the said cans are directly below the ends of the tubes G.

The steam-cooker may be used in various other ways, and always cooks very rapidly and thoroughly.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The vessel A, having lid B, water-tube C, flanged disk D, with central tube, E, the head F, with downwardly-inclined tubes G, and the perforated disk J, with legs K, as shown and described.

ELIZABETH GALLAHER.

Witnesses:

G. H. BELL,
HEPBURN MCCLURE.

(No Model.)

E. WEYL.
Ironing Table.

No. 237,791.

Patented Feb. 15, 1881.

FIG. 1.

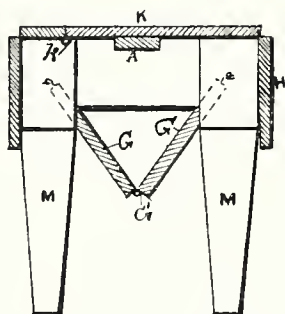


FIG. 2.

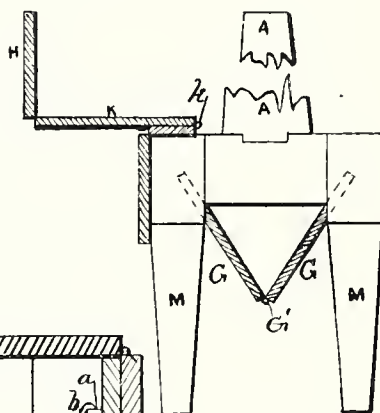


Fig. 4.

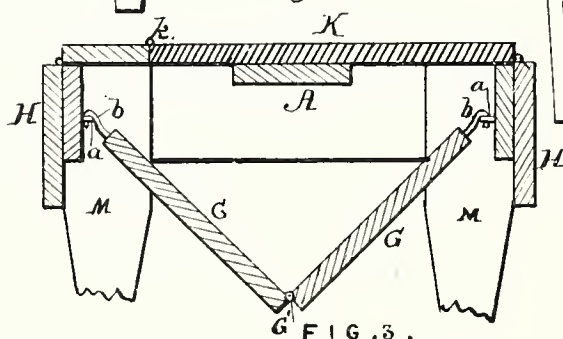
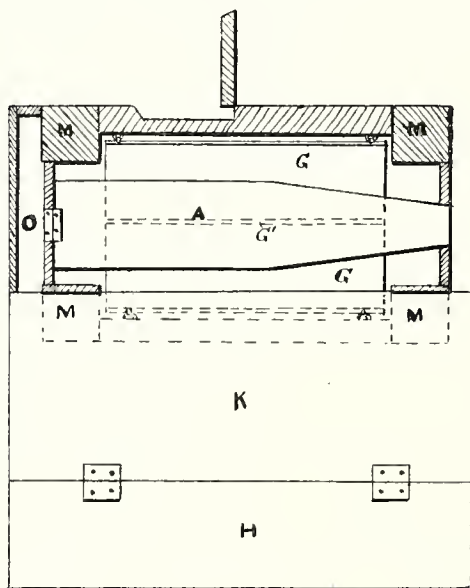


FIG. 3.



WITNESSES:

H. M. Richmond,
L. L. Richmond

INVENTOR:

Elizabeth Weyl.

UNITED STATES PATENT OFFICE.

ELIZABETH WEYL, OF VALLONIA, PENNSYLVANIA.

IRONING-TABLE.

SPECIFICATION forming part of Letters Patent No. 237,791, dated February 15, 1881.

Application filed May 1, 1880. (No model.)

To all whom it may concern:

Be it known that I, ELIZABETH WEYL, a citizen of the United States, resident at Vallonia, in the county of Crawford, State of Pennsylvania, have invented a new and useful Ironing-Table, of which the following is a specification.

My invention relates to improvements in tables and boards for ironing clothes, and is a breakfast-table and ironing-board combined. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents an end view with the top of the table down in the form of a common "fall-leaf table." Fig. 2 represents an end view of the table with the top and leaf turned back, showing the ironing-board A A. Fig. 3 represents a top view of my table, showing the table-top K and the fall-leaf turned back, with the ironing-board A in place for use. Fig. 4 represents a vertical sectional view of my improvement on an enlarged scale, showing the manner of attaching the removable hinged guard.

The ironing-board A is hung at the wide end by a hinge to the frame of the table, so that it can be lifted up and inserted into the garment to be ironed. K, the top of the table, is hinged to the frame of the table and to the leaf H, so

that it can be turned back, as shown in the drawings. (See Figs. 3 and 2.)

G G represent the hinged removable guard, which serves to keep the under side of the garment being ironed from contact with the floor. To the inside frame of the table (best seen in Fig. 4) are arranged eyes or staples a, which receive the hooks or bolts b of the guard G G, whereby it may be readily attached or detached to or from the table, as occasion may require. This guard G G is hinged at G'; but any known and suitable fastening may be used in lieu of the fastenings a b, so that the guard may be easily removable.

O is a receptacle in the end of the table, to hold a cloth on which the iron is to be wiped, and also an "iron-stand." M M M M represent the table-legs.

The boards G can be unhooked from the table-frame and removed, if desired.

I claim—

In combination with an ordinary leaf-table, having its top K hinged at k, the ironing-board A and the hinged guard G G, attached to the inside of the table-frame and made removable, as and for the purpose described.

ELIZABETH WEYL.

Witnesses:

H. M. RICHMOND,
L. L. RICHMOND.

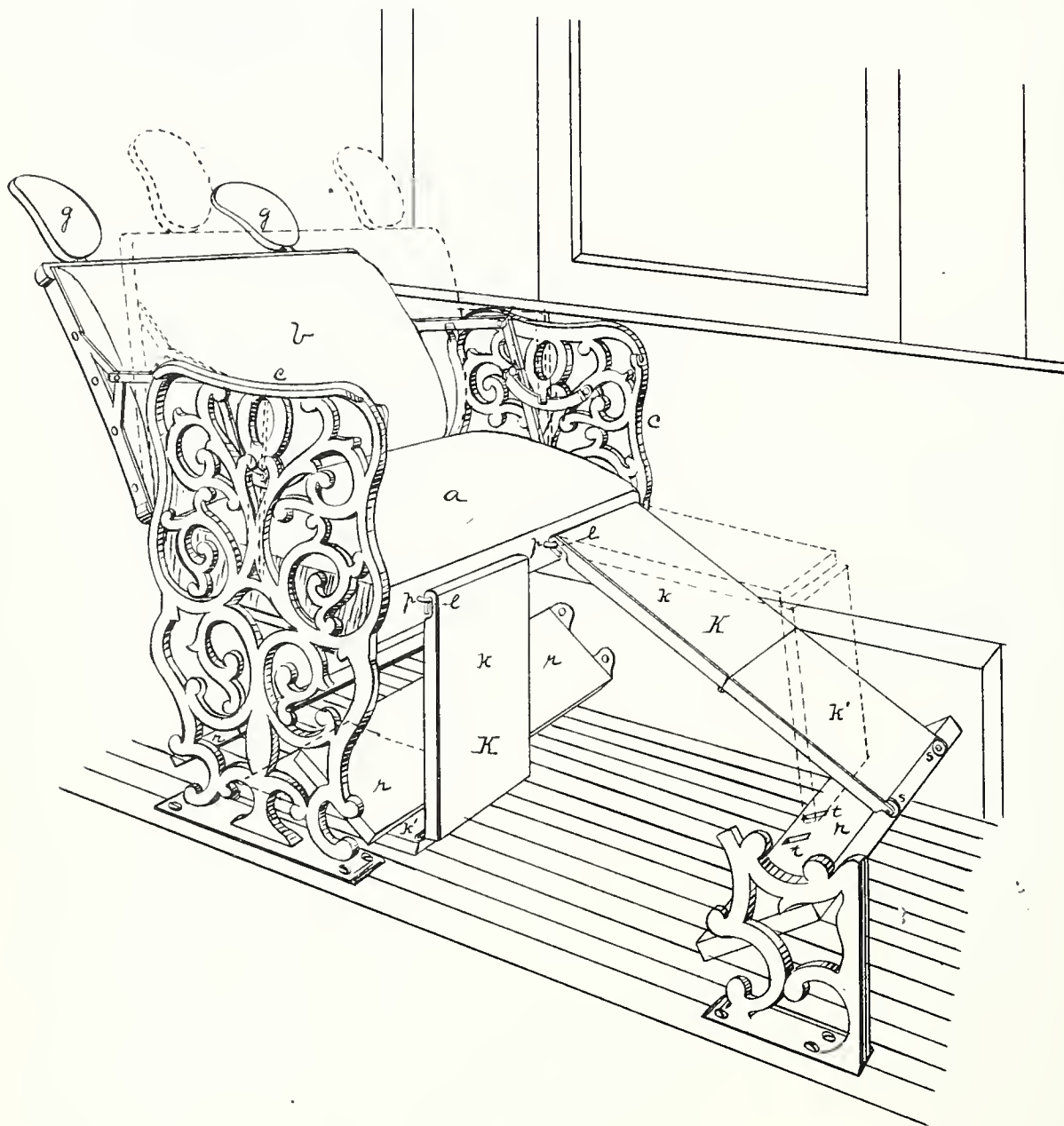
(No Model.)

C. BEGGS.

LIMB SUPPORT FOR CAR SEATS.

No. 244,529.

Patented July 19, 1881.



W. Knepper.

F. L. Hay
J. B. Mellon

Inventor.

Inventor. Christina Beggs
By Attorney. James I. Hay

UNITED STATES PATENT OFFICE.

CHRISTENA BEGGS, OF ALLEGHENY CITY, PENNSYLVANIA.

LIMB-SUPPORT FOR CAR-SEATS.

SPECIFICATION forming part of Letters Patent No. 244,529, dated July 19, 1881.

Application filed January 3, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHRISTENA BEGGS, of Allegheny City, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Limb-Supports for Car-Seats; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming a part of this specification, which represents a perspective view of a car-seat illustrating my invention.

My invention relates to the seats used in passenger-cars for transportation of travelers, and it has special reference to certain improvements on the inventions set forth in Letters Patent No. 229,944, granted to me July 13, 1880.

My invention consists in certain improvements in limb-supports to be used with the ordinary reversible railroad-car seats, to add to the comfort of the traveler.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

The car-seat is of the usual construction, being formed of the seat *a*, back *b*, and arms *c*. The back is secured to the seat in the usual way in reversible car-seats, the way preferred being by means of two rods at either side thereof working in a bracket, so as to enable the back to be thrown in an inclined position, as shown in the patent granted to me as above referred to, and the back is provided with any suitable head-rests, *g*.

To provide a support for the limbs, (to be used, when desired, by the traveler, either with the upright or reclining back,) I form the removable folding limb-supports *K*, which are made of wood or metal and covered with carpet or other suitable material, and may be padded, if desired. They may also be formed of canvas or carpet, (stretched on an iron frame,) which will yield to the position of the limbs. The support is provided with two hooks, *l*, on either side of the top, which catch in the loops or eyes *p* on the sides of the seat, the loops or eyes *p* being formed on both sides of the seat, so that when the back is reversed the limb-supports may be removed and secured on the opposite side, as referred to hereinafter.

It is formed in two parts, *k k'*, hinged together, the upper part, *k*, being of such length that when the extension *k'* is bent down the part *k* will lie against the lower part of the seat and the extension rest under the seat, the support being thus entirely out of the traveler's way. When, however, he desires to use the support, all that is necessary is to swing it up and bend out the extension, and the support will be sustained by the foot-rest *r* under the adjacent seat, the end of the extension resting thereon, and forming a very comfortable support for the limbs. At the base of the extension *k'* two casters or rollers, *s*, are secured, to facilitate its being pushed under or withdrawn from under the car-seat. In some cases it is desirable to raise the limb-support higher than when its end rests on the foot-rest, as for the accommodation of children. This I accomplish by forming recesses or slots *t* near the base of the foot-rest and raising the part *k* of the limb-support up and bending the extension *k'* down until the casters *s* or other suitable lugs fit into these slots *t*, as shown in dotted lines, when the part *k* will be supported in nearly a horizontal position. The hooks at the top of the support are so curved that they can only be lifted out of the loops *p* when the support is folded or resting against the seat, so that there is no liability of their becoming detached from the seat when in use by the traveler. When the car is reversed and the seats face in the opposite direction the supports can be lifted off by the porter and arranged to hook on the opposite seat, thus suiting for traveling in either direction. They may also be removed and placed under the seats, and will thus occupy no room desired for other purposes.

I thus provide a simple and comfortable limb-support which can be easily arranged by the traveler, and, in connection with the reclining back, will change the upright seat into an exceedingly comfortable couch.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In car-seats having reversible backs arranged to face in either direction, the seat *a*, provided with loops *p* on both sides thereof, and the foot-rest *r*, in combination with the

folding limb-support K, having hooks *l* adapted to catch in the loops on either side of the car-seat and form a removably-hinged folding limb-support, substantially as and for the purposes set forth.

2. In ear-seats having reversible backs arranged to face in either direction, the combination of the seat *a*, provided with the loops *p* on both sides thereof, the removably-hinged folding limb-support K, having hooks *l*, and

lugs or ears *s*, and the foot-rest *r*, having the slots *t*, substantially as and for the purposes set forth.

In testimony whereof I, the said CHRISTENA BEGGS, have hereunto set my hand.

CHRISTENA BEGGS.

Witnesses:

F. G. KAY,
JAMES I. KAY.

(No Model.)

C. D. STITT.

ADJUSTABLE TABLE AND BOOK SUPPORT.

No. 248,894.

Patented Nov. 1, 1881.

Fig. 1.

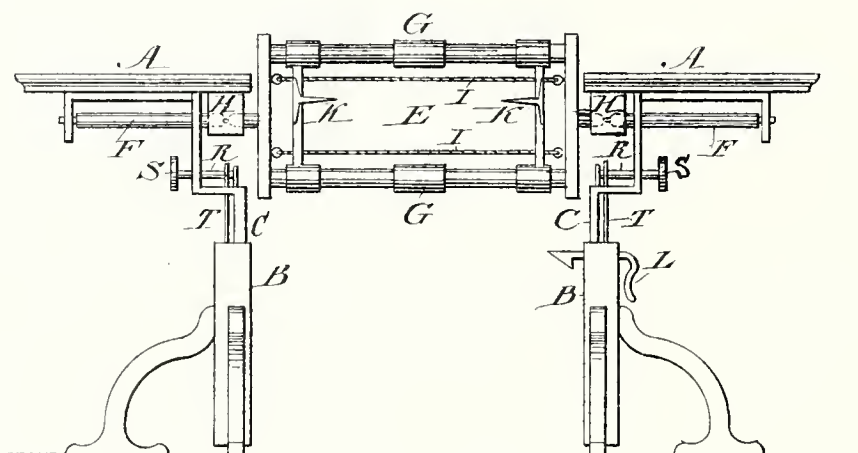


Fig. 3.

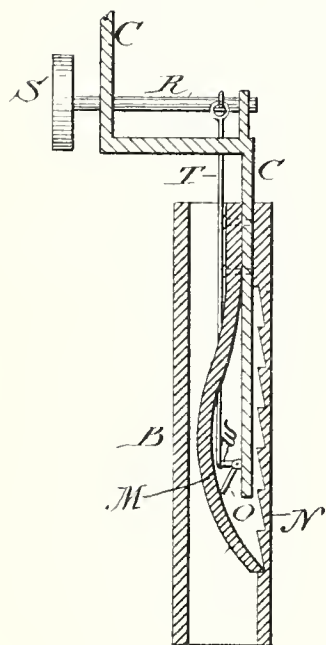


Fig. 2.

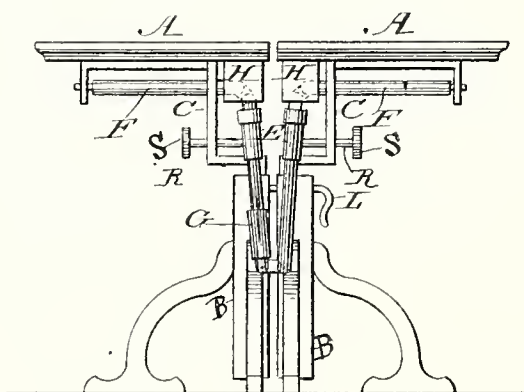
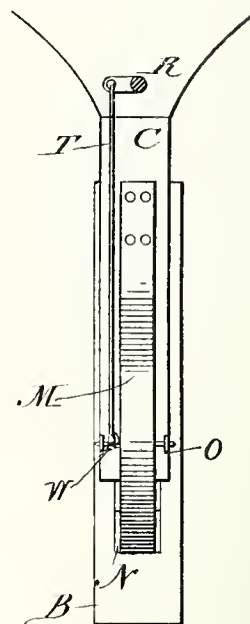


Fig. 4.



Witnesses:
James C. Shutt
Howard Hyde

Inventor:
Celestia D. Stitt
By Joseph Smith
her Attorney in fact.

UNITED STATES PATENT OFFICE.

CELESTIA D. STITT, OF TITUSVILLE, PENNSYLVANIA.

ADJUSTABLE TABLE AND BOOK-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 248,894, dated November 1, 1881.

Application filed November 17, 1880. (No model.)

To all whom it may concern:

Be it known that I, CELESTIA D. STITT, of Titusville, in the county of Crawford and State of Pennsylvania, have invented a new and useful Adjustable Table and Book-Support, of which the following is a specification.

The object of my invention is to provide a neat, convenient, and ornamental book-support, easily adjusted as to height and position, which may be made a part of a library or drawing-room table, or be applied to an invalid chair or bed. I attain this in the manners shown in the accompanying drawings, in which the book-support is shown as forming a part of a center table—

Figure 1 being an elevation of the table extended, and the book-support inclined on its axis, and Fig. 2 a similar view, with the book-support folded and the table closed. Figs. 3 and 4 are enlarged views of the mechanism adapted for adjusting the height of the table and book-rest.

The same letters are used in the several views to indicate the same parts.

A A is the table top or leaves; B B, base; C C, adjustable standards; E, frame or book-support, constructed as hereinafter described; F F, shafts revolving in journals or bearings in the standards C C, and with which the frame E revolves.

The frame E is constructed with a double hinge-joint in each side bar, which joints are covered by the sliding ferrules G G when the frame is open, as shown in Fig. 1. There is also a drop-joint, H, in each shaft F F.

I I are cords, upon which the book rests. K K are sliding bars, having spring-fingers attached for holding the leaves of the book open.

When the table is open and the frame E extended the frame revolves with the shaft F F, and may be secured in any position by a rack or clamp upon the shaft.

When desired to close the table the frame E is brought to a horizontal position, the ferrules G G slipped to one side, uncovering the double joint in the side bars, when the frame folds downward, and the two sections of the table are brought together and secured by the spring-catch L or any other device, the frame E folding under the table and into recesses in the standards C C.

For adjusting the height of the table I make the standards C C to slide up and down in the bases B B. The mechanism for holding them

in any desired position is illustrated more fully in Figs. 3 and 4.

To the standard C is attached the spring M, engaging with the rack-teeth N in the base B. This allows the standard C to be drawn upward, but prevents it from returning. To control this, I place between the standard C and the spring M the lever O, hinged to the standard and operating against the spring. The lever O has an arm, W, which is attached to a rod, T, which, in turn, at its upper end is attached to an arm on the shaft R, near the top of the standard C. This shaft has a milled head, S. By turning the shaft R the lever O is raised, releasing the spring M from the rack-teeth N, and the standard C is allowed to move downward with perfect freedom.

For application to an invalid-chair or bed I attach to either side of the chair or bed a socket similar to those in the bases B B, in which the standards C C are adjusted, as above described. When not in use the standards C C are entirely withdrawn, and, with the frame E, folded and laid away.

I claim as my invention—

1. A folding book support or frame, E, constructed as described, in combination with the adjustable standards C and the jointed shafts F F on either side, the said shafts revolving in bearings in the adjustable standards C C, substantially as described.

2. In combination with an extension-table, the central folding frame, E, constructed as described, and the jointed shafts F F, said shafts revolving in bearings on the under side of the table-top A A, substantially as described, and for the purposes herein set forth.

3. For regulating the height of the table A, the combination of the adjustable standard C, base B, provided with rack-teeth N, spring M, engaging with the teeth N, lever O, rod T, and shaft R, substantially as described.

4. The table-top A A, adjustable standards C C, central folding frame, E, constructed as described and revolving with the shafts F F, in combination with the base B B, each section of the base being provided with rack-teeth N, spring M, engaging with the teeth N, lever O, rod T, and shaft R, substantially as described, and for the purposes herein set forth.

CELESTIA D. STITT.

Witnesses:

M. R. ROUSE,
A. B. HOWLAND.



(No Model.)

2 Sheets—Sheet 1.

M. E. BEASLEY.
BARREL HOOP DRIVING MACHINE.

No. 245,050.

Patented Aug. 2, 1881.

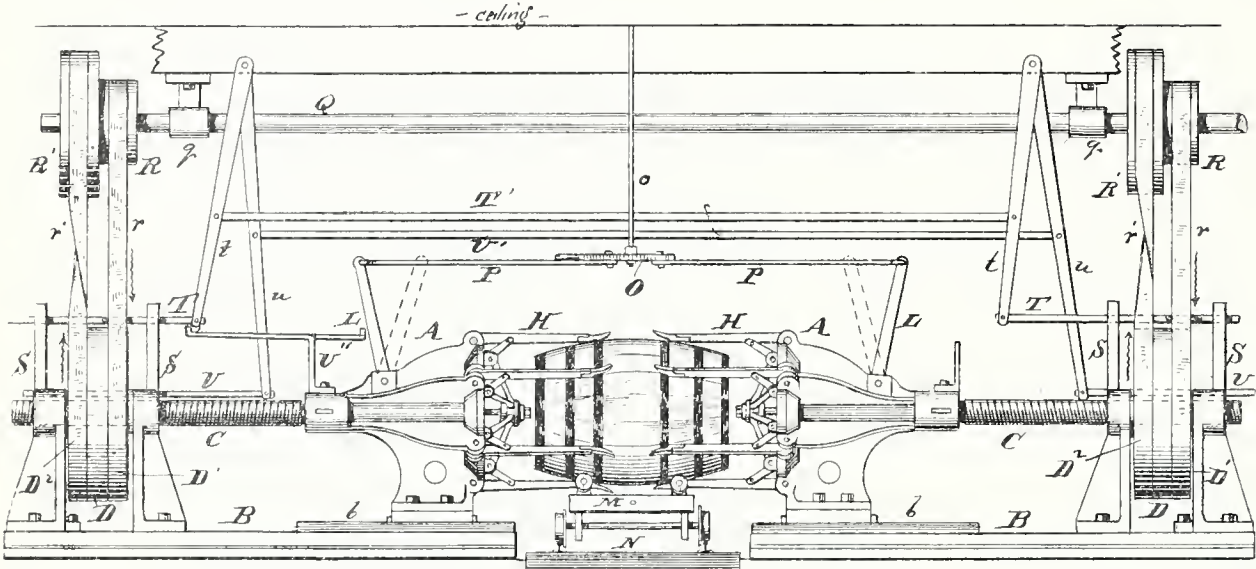


Fig. 1

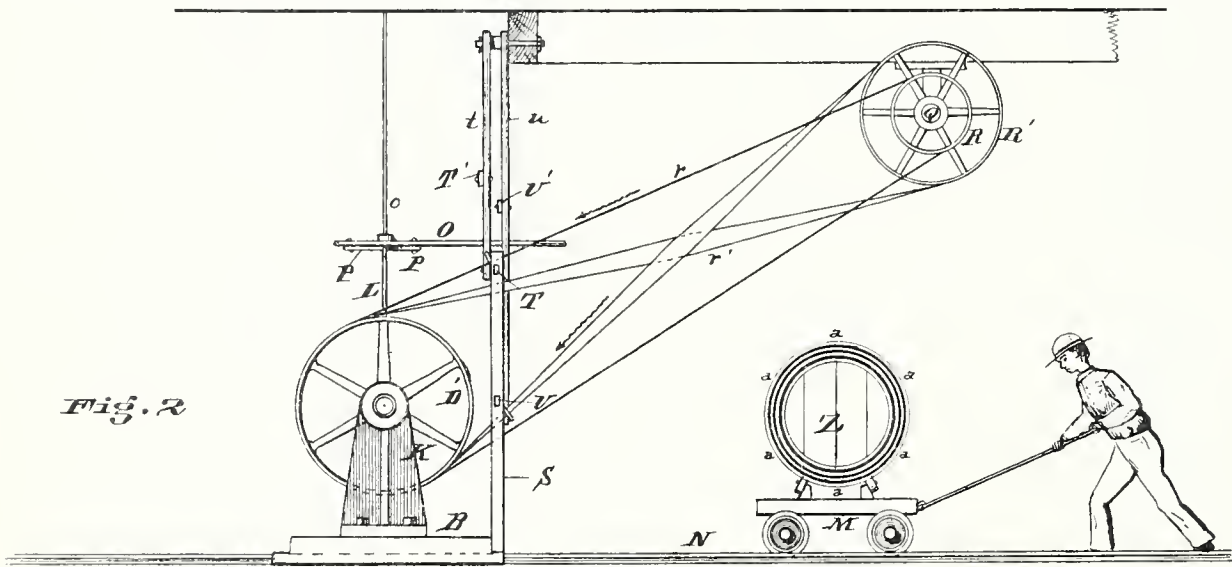


Fig. 2

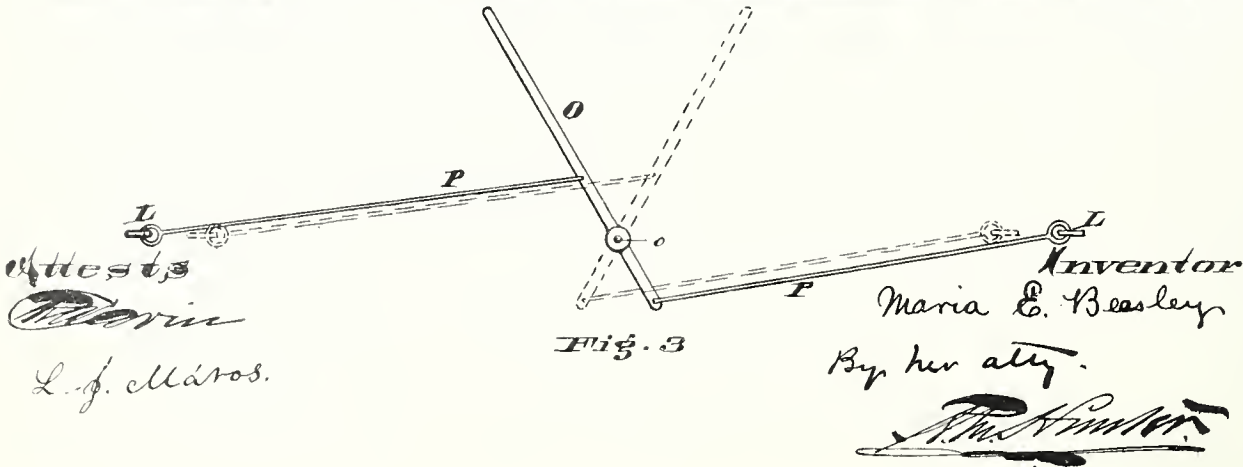


Fig. 3

Attests
W. J. Maros
L. J. Maros.

Inventor
Maria E. Beasley
By her atty.
W. J. Maros

(No Model.)

2 Sheets—Sheet 2.

M. E. BEASLEY.
BARREL HOOP DRIVING MACHINE.

No. 245,050.

Patented Aug. 2, 1881.

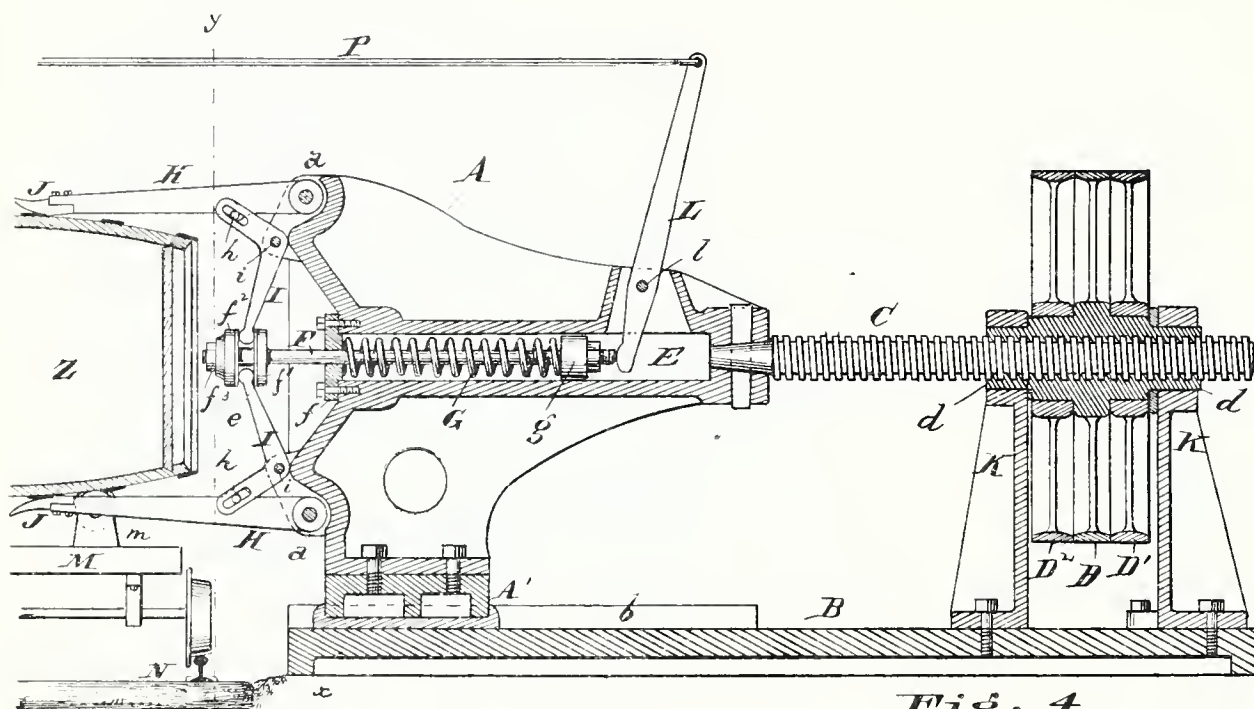


Fig. 4

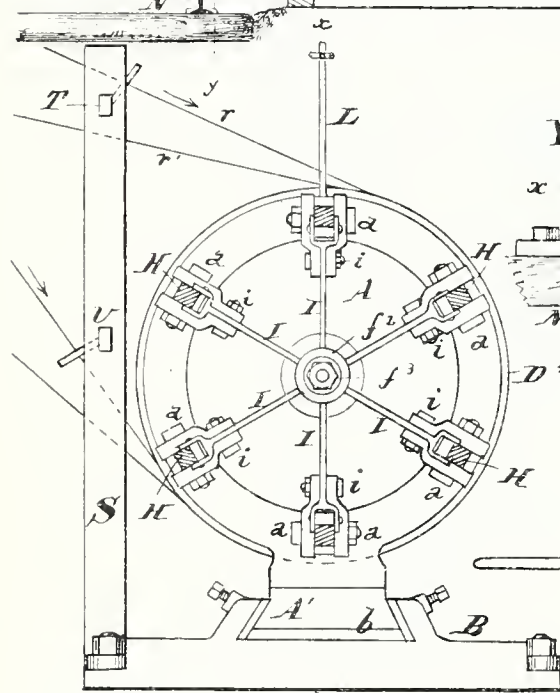


Fig. 5

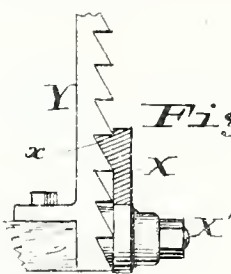


Fig. 7



Fig. 10

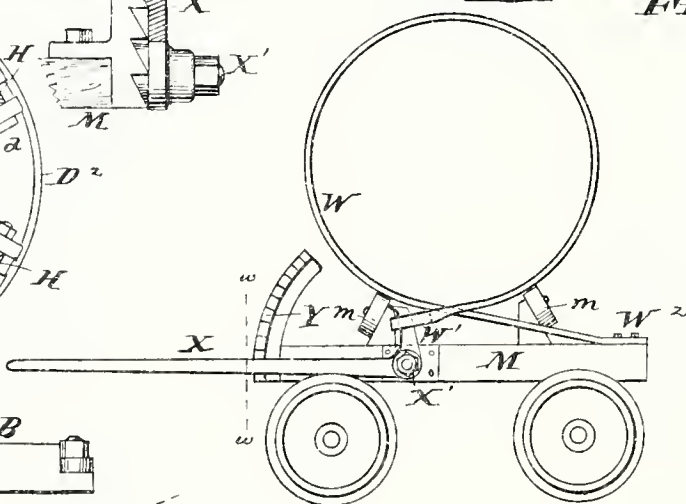


Fig. 6

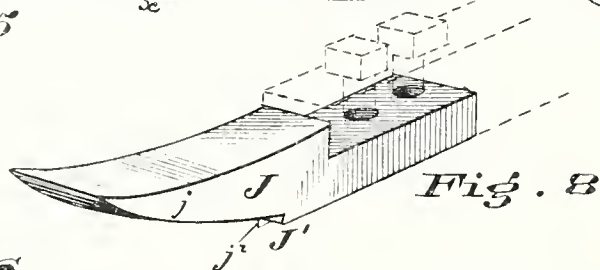


Fig. 8

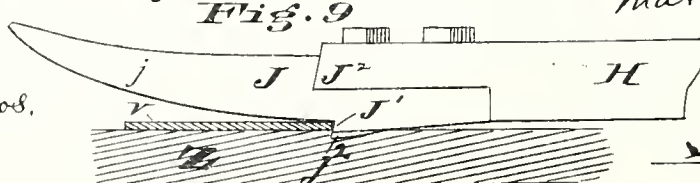


Fig. 9

Attests

Charles J. Mayros.

L. J. Mayros.

Inventor
Maria E. Beasley
By her atty.

Wm. H. Beasley

UNITED STATES PATENT OFFICE.

MARIA E. BEASLEY, OF PHILADELPHIA, PENNSYLVANIA.

BARREL-HOOP-DRIVING MACHINE.

SPECIFICATION forming part of Letters Patent No. 245,050, dated August 2, 1881.

Application filed July 10, 1880. (No model.)

To all whom it may concern:

Be it known that I, MARIA E. BEASLEY, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Machines for Forcing Iron Hoops on Barrels, of which the following is a specification.

My invention relates to that class of machines which are designed to force the iron hoops on barrels after the staves are in position and loosely hooped; and my invention consists in mechanism to force the iron hoops on the barrel from both sides simultaneously, in the manner hereinafter set forth, and which mechanism is fully set forth in the following specification, shown in the accompanying drawings, and referred to in the appended claims.

The object of my invention is to construct a machine to do what manual labor is now employed to do, and to save time and expense in this line of manufacture.

In the drawings, Figure 1 is a front elevation of the machine complete. Fig. 2 is a side elevation of same. Fig. 3 is a plan of levers to operate the hooping-arms. Fig. 4 is a sectional view of one-half of the machine on the line *x x* of Fig. 5. Fig. 5 is a cross-section of the machine on line *y y* of view shown in Fig. 4. Fig. 6 is an elevation of a barrel-compressing device attached to the truck. Fig. 7 is a cross-section of same on line *w w*, Fig. 6. Fig. 8 is a perspective view of the hooping-toe. Fig. 9 is an elevation of same. Fig. 10 is a sectional view of safety mechanism applied to the driving-screw.

The parts of the machine on both sides of the railroad *N* are exactly similar, except that the screws *C C* are right and left handed. Therefore when I describe one side I also describe the other.

A are reciprocating heads, which slide upon the guideways *b* on bed-plate *B* through the agency of the slides *A'*, attached to the heads. These heads *A* are keyed to screws *C*, which are reciprocated by band-wheels *D*, provided with hubs *d* working upon the screws *C* and supported in bearings *K*. Upon either side of the driving band-wheels *D*, and working upon their hubs, are idler-wheels *D'* and *D''*.

The heads *A* are provided with a series of hooping-arms, *H*, pivoted to the heads at *a*, and provided on their ends with hooping-toes

J, to be hereinafter described. Pivoted at *i* are a corresponding series of bell-crank levers, *I*, the outer ends of which operate on the arms *H* through the agency of a slot and pin, *h*, to throw them out or draw them in. The other ends of these levers *I* are held between two brass washers, *e*, in turn held by the hub *f'* on shaft *F* and nuts *f''* and *f'''*.

The shaft *F* is inclosed by a spring, *G*, one end of which rests against lock-nuts *g* on shaft *F*, and the whole is then placed in a hollow hub or hole, *E*, in the center of the heads, and the cap *f* is then placed in position and screwed over the opening *E*, which cap supports the other end of the spring. The action of the spring *G* and shaft *F* is to force the arms *H* upon the barrel *Z* and make them adjust themselves to uneven surfaces, and also to prevent the toes slipping over the hoops *V* in the forward movement.

Pivoted at *l* is a lever, *L*, the shorter arm of which rests against the end of the shaft *F* in the hole *E*, as shown in Fig. 4. These two levers *L*, one on each end of the machine, are connected to a lever, *O*, by bars *P* on opposite sides of the fulcrum and supporting-rod *o*, as shown in Fig. 3. By moving the lever *O*, the levers *L* are drawn in together or thrust apart.

The hooping-toe *J* is preferably composed of a step casting or forging of steel, and is provided with a curved end, *j*, as a guide, a slightly acute-angled edge, *J'*, to catch the hoop, and, if desired, a small knife-edge, *j''*, to act as a guide by cutting slightly into the wood. The step *J''* is more or less inclined, so as to fit more tightly to the arm *H* the greater the pressure.

The toe may be bolted or otherwise secured to the arm.

The truck *M* runs upon the track *N*, and is provided with wheel-supports *m*, upon which the barrel rests. Instead of these wheel-supports, a curved block or blocks may be used; but in any case the barrel is free to move and adjust itself to the arms *H*, which are located about and press upon it on all sides.

If desired, a clamping device for the staves near the end hoops can be applied to either side of the truck *M*, as shown in Fig. 6, in which *W* is a compressing steel band attached at one end, *W''*, to the truck, and having a loop in the other end at *W'*. Into this loop the small arm of the bell-crank lever *X*, pivoted

at X', is placed. To one side of the lever X, and bolted to the truck, is a rack, Y, into the teeth of which engages a tooth *x*, on the lever-arm X. To operate this device I proceed as follows: The band W is passed around the barrel near the ends or heads of same hoops, and the end W' is passed over the short arm of lever X. The lever is then pressed down until the staves are compressed and the end hoop can be more easily shoved on. The tooth *x*, engaging with the teeth of the rack Y, prevents the lever X returning until disengaged by a lateral movement. The driving-shaft Q is supported overhead in brackets *q*, and is supplied with two driving band-wheels, R R', of different diameters, on each end, and over the band-wheels D. The pulleys R drive the idler-pulleys D' by a band, *r*, in one direction, and the large pulleys R' drive the idlers D² in the opposite direction by the twist in the band *r'*. These bands *r* and *r'* are shifted to the driving-wheel D, respectively, by the bars T and U, provided with teeth, between which the bands move, which bars slide in standards S and are operated independently of each other by levers *t* and *u* and by bars T' and U'. The bands are so arranged that when one driving-wheel, D, is set in operation the other one is also operated. The movements are always started by the operator, but can be brought to rest automatically by the stop U'' acting upon the bars T and U to throw the band off the driving-pulley on to the idlers.

The operation is as follows: The heads A A being screwed back, the arms H are thrown out by lever O. A barrel, Z, being placed upon the truck M with its loose bands V on, it is run into position between the two heads A A, and the propelling-bands *r* are then shoved over upon the driving screw-pulleys D, causing the screws C to be forced toward barrel, carrying the heads with them. The said heads are then reciprocated simultaneously in opposite directions; then the lever O is disengaged, and the spring G, coming into play, draws the toes J and arms H down tightly against the barrel Z, and as the toes move toward the middle of the barrel they catch first the largest hoop and push it up tightly. Then the motion is reversed until the toes are back of the second hoop, when it is again reversed to force this hoop up, and so on to the end hoop, both sides of the barrel being hooped simultaneously. The lever O has not to be touched except at the starting of the operation on a new barrel, and then for the purpose of passing the two outer hoops, and to operate on the middle hoops first. As the toes J move back over a hoop the spring G gives way sufficient to allow the toes to pass without displacing it. When a barrel is hooped it is run off and another truck and barrel is run in place between the two heads. During the forcing up of the hoops the barrel are partly held by the arms H, and adjusts itself to them. A safety mechanism in the form of a spring, C², can be placed

between the head A and a collar on the screw C, the end C' of the same being free to slide in the hub of head A. This allows any undue strain to be taken up by the spring and not break the hoops.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the two reciprocating heads A, lever-arms H, pivoted to the peripheries of said heads, levers I, pivoted to the heads and operating the arms H, shafts F, situated within the heads and operating the levers I, and spring G to operate upon the above mechanism to keep the arms H down upon the barrel, substantially as and for the purpose specified.

2. A toe for a hooping-machine provided with guide end, *j*, acute-angled ledge J', and knife-edge *j'*, substantially as and for the purpose specified.

3. In a hooping-machine, the combination of two reciprocating heads, A, lever-arms H, pivoted to the peripheries of said heads, and provided with toes J to catch the hoops, levers I, pivoted to the heads and actuating the arms H, shaft F, situated within the heads and operating the levers I, spring G to operate the above mechanism to keep the arms H down upon the barrel, levers L, pivoted to the heads and operating the shafts F, lever O to operate the levers L, and bars P to connect the lever O with levers L, substantially as and for the purpose specified.

4. The reciprocating head A, provided with pivoted arms H, in combination with a driving-screw, C, arranged to slide in said head, band-wheel D, and a safety-spring, C², substantially as and for the purpose specified.

5. The combination of two oppositely-reciprocating heads, A, provided with pivoted arms H about their peripheries, levers I, shaft F, and spring G, or their equivalent, with a support for the barrel while being operated on, arranged between the heads A, and provided with clamping or compressing mechanism consisting of bell-crank lever X, provided with tooth *x*, rack Y, and band W, for the purpose of compressing the barrel at both of its ends, all constructed substantially as shown and described, and for the purpose specified.

6. The combination, with two reciprocating heads, A, provided with arms H, with screw C, band-wheels D D' D², driving-shaft Q, driving-wheels R R', bands *r r'*, bars T U, levers *t u*, bars T' U', levers L, and mechanism to cause the arms H to be pressed upon the barrel, rods P, and lever O, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

MARIA E. BEASLEY.

Witnesses:

ROBT. A. CAVIN,
R. M. HUNTER.

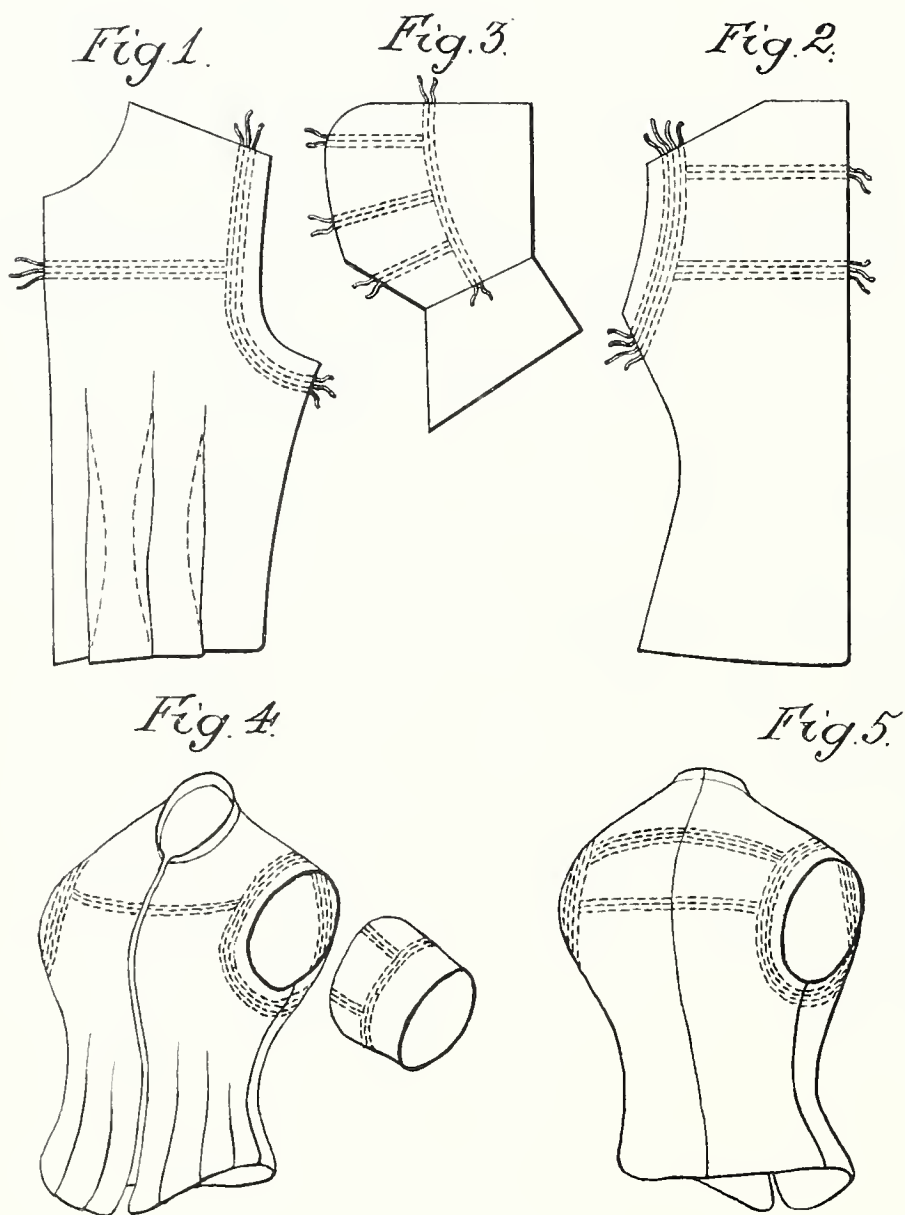
(No Model.)

H. G. SUPLEE.

PATTERN AND LINING FOR GARMENTS.

No. 250,998.

Patented Dec. 13, 1881.



Witnesses
David S. Williams
Harry Smith

Inventor
Hannah G. Suplee
by her Attorneys
Howson and Long

UNITED STATES PATENT OFFICE.

HANNAH G. SUPLEE, OF PHILADELPHIA, PENNSYLVANIA.

PATTERN AND LINING FOR GARMENTS.

SPECIFICATION forming part of Letters Patent No. 250,998, dated December 13, 1881.

Application filed September 8, 1881. (No model.)

To all whom it may concern :

Be it known that I, HANNAH G. SUPLEE, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented an Improvement in Patterns and Linings for Garments, of which the following is a specification.

The object of my invention is to permit a more accurate fitting of the garment to the person than is possible as garments are now fitted. This object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a view of a pattern for one half of the front of a dress-body made according to my invention; Fig. 2, a view of a pattern for half of the back of the same; Fig. 3, a view of a sleeve-pattern; Fig. 4, a front view of the body-pattern and sleeve after being fitted, and Fig. 5 a back view of the body-pattern.

In carrying out my invention I discard the use of paper in making the patterns, and employ for this purpose ordinary drilling, or other fabric which can be properly fitted to the person before the material of the garment is cut, the pattern being then utilized as a lining for the garment, thus saving waste in cutting the material and decreasing the cost of the garment to the extent that the lining would otherwise cost.

In order to afford facilities for fitting the pattern to the person, I provide the different pieces of the pattern with drawing-strings,

suitably arranged, in order that the size of the pattern can be contracted at points where such contraction is most likely to be needed. For instance, the pattern shown in the drawings has strings around the armholes, in the sleeves, across the breast, and across the back. The location of these drawing-strings will vary, however, in accordance with the character of the pattern to which they are applied, and the number of drawing-strings in any one place may also be varied, as circumstances may suggest. The strings are arranged side by side, are independent of each other, and are free at each end, so that one part may be contracted to a greater or less extent than a portion adjacent thereto.

Although I have shown my invention as applied to a dress-body, it will be evident that it is applicable to other articles of apparel as well.

I claim as my invention—

A garment pattern or lining, having combined therewith a series of drawing-strings arranged side by side and independent of each other, all substantially as described and shown.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HANNAH G. SUPLEE.

Witnesses:

HARRY DRURY,
HARRY SMITH.

(No Model.)

L. PRESSER.

MEANS FOR ATTACHING ARTIFICIAL HAIR TO THE HEAD.

No. 250,967.

Patented Dec. 13, 1881.



FIG. 5.

FIG. 1.

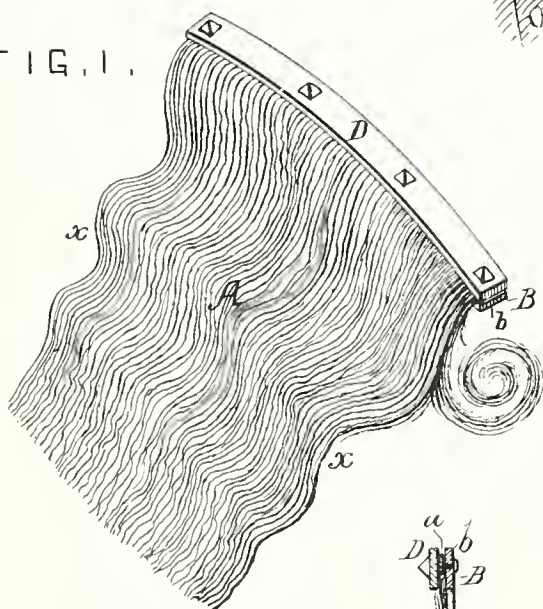


FIG. 2.

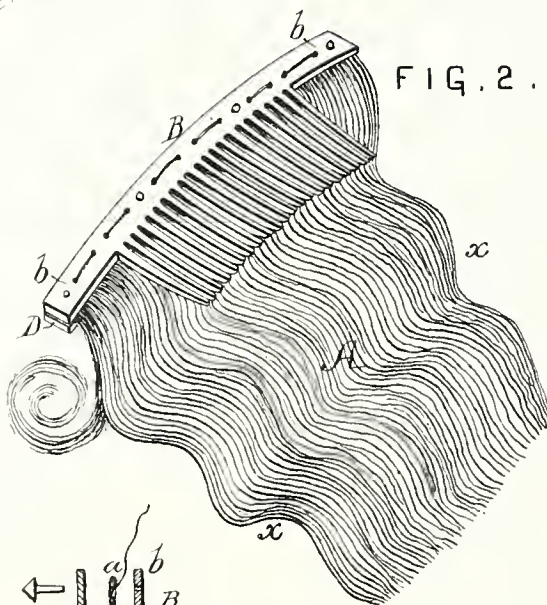
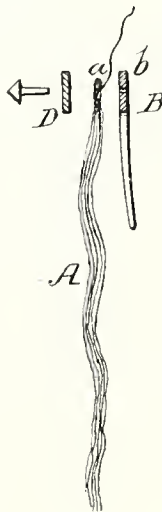


FIG. 3.



FIG. 4.



WITNESSES:

D. S. Williams.

James F. Tobin.

INVENTOR:

Lisetta Presser
by her Attorneys
Howson and Son

UNITED STATES PATENT OFFICE.

LISSETTA PRESSER, OF PHILADELPHIA, PENNSYLVANIA.

MEANS FOR ATTACHING ARTIFICIAL HAIR TO THE HEAD.

SPECIFICATION forming part of Letters Patent No. 250,967, dated December 13, 1881.

Application filed June 3, 1881. (No model.)

To all whom it may concern:

Be it known that I, LISSETTA PRESSER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented an Improvement in Attaching Artificial Hair to the Head, of which the following is a specification.

The object of my invention is to provide means for readily attaching folds, curls, or waves of artificial hair to the natural hair without displaying any means of attachment other than that which is seen when an ordinary comb is introduced into the natural hair for retaining folds and plaits of the same.

In the accompanying drawings, Figures 1 and 2 are front and rear views of the artificial hair attacher; Fig. 3, a vertical section; Fig. 4, a vertical section of the parts detached from each other, and Fig. 5 a view showing one mode of applying the attacher.

The device consists of three main parts, namely: first, a mass, A, of hair; second, a comb, B; and, third, a strip of any suitable material, between which strip and the comb the mass of hair is secured. It is immaterial how the comb part is made, providing it can be retained by its teeth in the natural hair, an ordinary comb, such as ladies use for keeping folds or plaits of hair in place, being applicable to my invention, or a special comb, made of metal, may be used for the purpose. It is preferable, however, for the upper bar, *b*, of the comb to project at both ends beyond the teeth, for a purpose rendered apparent hereinafter. The mass of hair must be arranged partly in accordance with the position it has to occupy on the head, and partly in accordance with the taste of the wearer; but in most cases my invention will be used for re-enforcing scanty front hair with artificial waves. The hairs are interwoven at one end with threads, so as to form a braid, *a*, the opposite ends of the hairs being free to be formed into curls, waves, or other shaped masses, as the wearer may desire. The braided portion of the mass

of hair is secured between the bar *b* of the comb and the strip D by rivets, or otherwise. The only part of the comb exposed to view will be this strip, which may be ornamented, as the taste of the manufacturer and the demand of the wearer may suggest.

It is desirable that the teeth of the comb should not be observed through the mass of artificial hair, and as the latter is generally thinner at or near the opposite ends, *x x*, Fig. 2, the teeth of the comb are discontinued, so as to leave toothless projections *b b*.

The masses of hair may be prepared for attachment to the comb otherwise than by forming the hair into a braid at the upper edge of the mass; but I prefer the braid made by weaving, as the most efficient means of maintaining the hairs in the position to which they are first adjusted.

In Fig. 5 one wave only of hair is attached to the head, at one side of the same, by means of a comb, the teeth of which have been passed into the folds of natural hair, the natural hair only being shown at the opposite side of the head.

I claim as my invention—

1. The combination of a mass of artificial hair with a comb, and with a strip, D, between which and the bar of the comb the hair is secured, all substantially as set forth.

2. The combination of a comb having a top bar, *b*, and strip D, projecting laterally beyond the teeth, with hair-waves secured to the bar, said waves overlying the teeth, and extending laterally beyond the same, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

L. PRESSER.

Witnesses:

JAMES F. TOBIN,
HARRY SMITH.

UNITED STATES PATENT OFFICE.

MARY BEER, OF PHILADELPHIA, PENNSYLVANIA.

COMPOSITION FOR CLEANING AND DISINFECTING FEATHERS.

SPECIFICATION forming part of Letters Patent No. 243,754, dated July 5, 1881.

Application filed March 15, 1881. (No specimens.)

To all whom it may concern :

Be it known that I, MARY BEER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Composition of Matter for Cleaning and Disinfecting Feathers, of which the following is a specification.

My composition consists of the following ingredients, combined in the proportions stated, viz: water, ten gallons; chloride of lime, one pound; pulverized orris-root, six ounces; alcohol, one pint. These ingredients should be thoroughly mixed before using. This composition is placed in a suitable boiler and heated, and the fumes and vapors arising therefrom

are passed through the feathers to be treated, thereby eliminating thoroughly and speedily all germs of contagious disease and all unpleasant odors.

What I claim, and desire to secure by Letters Patent of the United States, is—

The herein-described composition of matter to be used in cleaning and disinfecting feathers, consisting of water, chloride of lime, orris-root, and alcohol, in the proportions specified.

MARY BEER.

Witnesses:

CRESCENTIA BEER,
W. W. DOUGHERTY.

(No Model.)

M. A. LOOS.
Floor Oil Cloth.

No. 242,947.

Patented June 14, 1881.

FIG. 1.

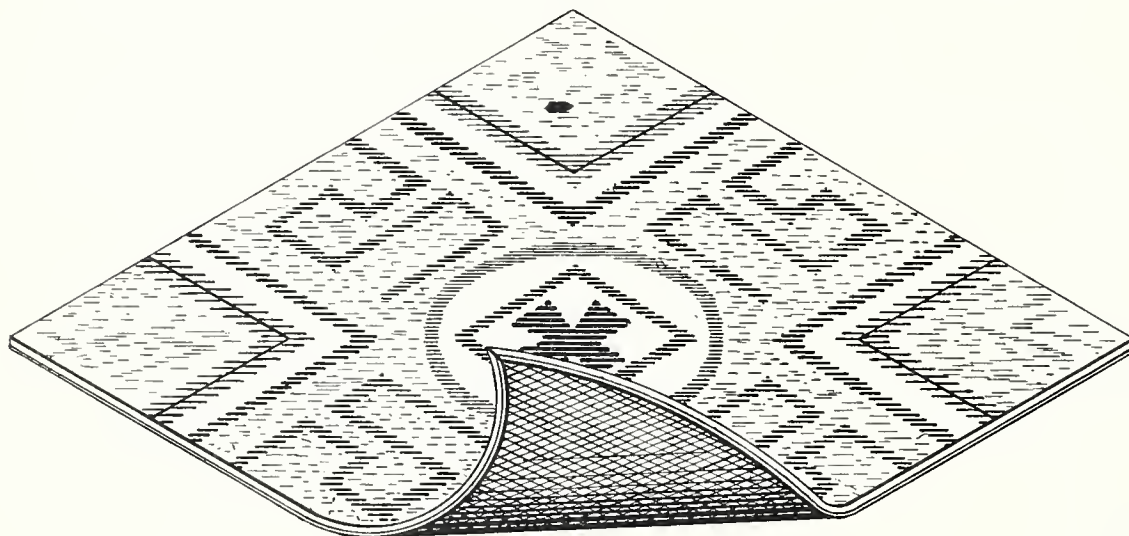


FIG. 2.



Witnesses:

Wm. P. Logan.
Harry Smith

Inventor:

M. A. Loos
by her Attorneys
Housman and Jopp

UNITED STATES PATENT OFFICE.

MARY A. LOOS, OF PHILADELPHIA, PENNSYLVANIA.

FLOOR OIL-CLOTH.

SPECIFICATION forming part of Letters Patent No. 242,947, dated June 14, 1881.

Application filed May 13, 1881. (No model.)

To all whom it may concern:

Be it known that I, MARY A. LOOS, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented an Improvement in Floor Oil-Cloths, of which the following is a specification.

The object of my invention is to prevent floor oil-cloth from adhering to the surface to which it is applied; and this object I attain by securing to the back of the oil-cloth a sheet of paper or equivalent material, all as hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a perspective view of a sheet of ordinary floor oil-cloth provided with a backing in accordance with my invention, and Fig. 2 an exaggerated section of a portion of the same.

Ordinary floor oil-cloth, especially when freshly made, is of such a character that the pressure to which it is subjected when in use causes the back of the cloth to adhere to the floor or other surface to which it is applied, so that in removing the cloth not only is the latter likely to be torn, but the floor or other surface is rendered unsightly by the adhering patches, which interfere with the proper application of another covering.

In carrying out my invention I secure to the back of the strip or sheet of oil-cloth a sheet of paper of any desired thickness, the preference being given to thin paper on account of

the firmer adherence of the same to the oil-cloth and because of its cheapness. The paper may be applied to the oil-cloth by passing it with the latter between rolls, and thereby subjecting it to a pressure sufficient to cause it to adhere to the back of the cloth, or a suitable paste or cement may be applied to the paper or cloth to insure the firm attachment of the two.

I have found in practice that when the oil-cloth is thus backed pressure exerted upon the surface will not cause the back to adhere to the floor, the backing, moreover, causing no material difference in the weight or cost of the product.

Thin muslin or other cheap fabric may in some cases be substituted for the paper backing; but the latter is to be preferred, on account of its economy.

I claim as my invention—

As a new article of manufacture, floor oil-cloth having a backing of paper or equivalent material secured thereto, as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARY A. LOOS.

Witnesses:

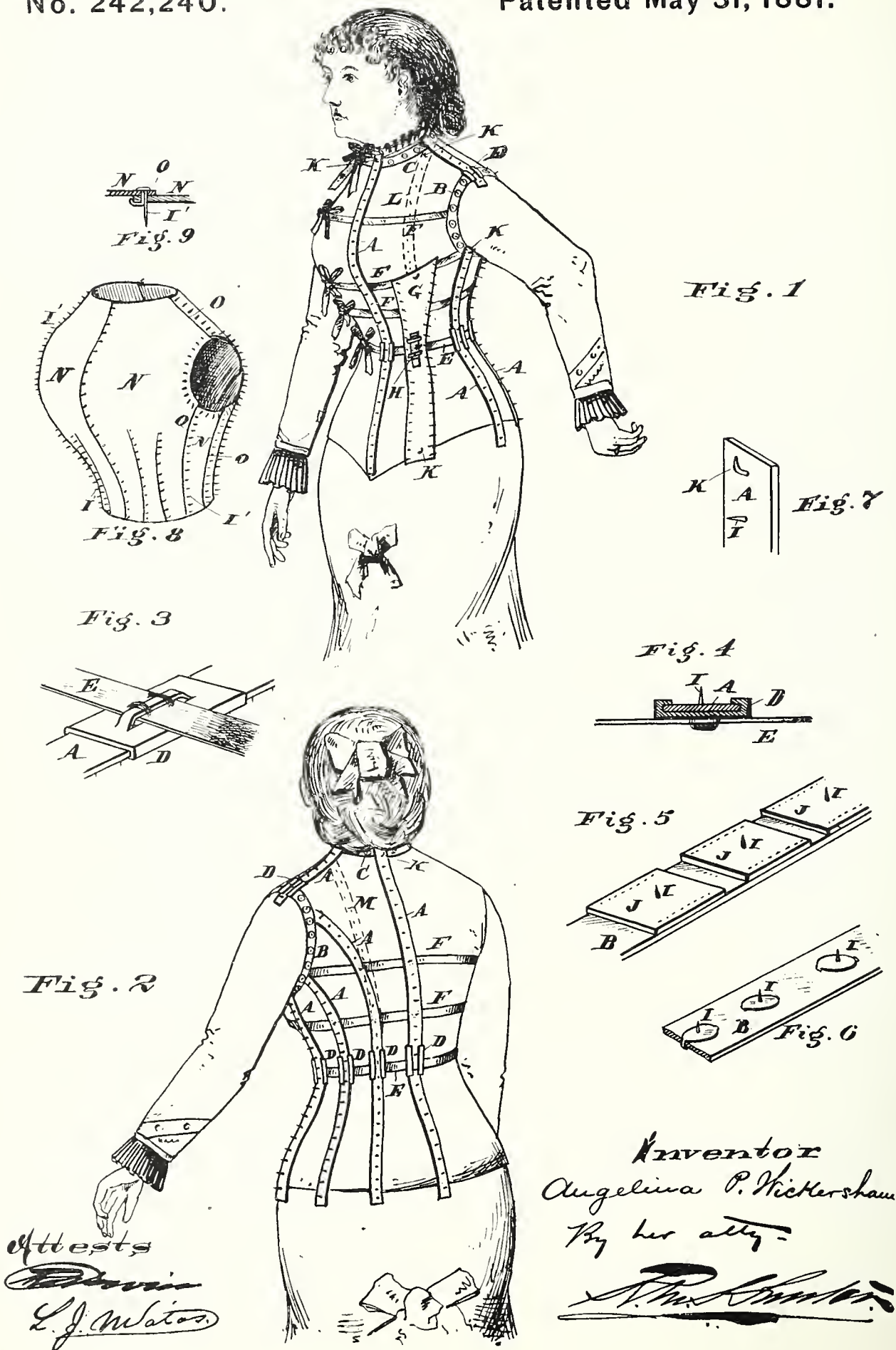
WM. P. LOGAN,
HARRY SMITH.

(No Model.)

A. P. WICKERSHAM.
Pattern Marker.

No. 242,240.

Patented May 31, 1881.



UNITED STATES PATENT OFFICE.

ANGELINE P. WICKERSHAM, OF PHILADELPHIA, PENNSYLVANIA.

PATTERN-MARKER.

SPECIFICATION forming part of Letters Patent No. 242,240, dated May 31, 1881.

Application filed February 21, 1881. (No model.)

To all whom it may concern :

Be it known that I, ANGELINE P. WICKERSHAM, of the city and county of Philadelphia, and State of Pennsylvania, have invented an
5 Improvement in Pattern-Markers, of which the following is a specification.

My invention relates to apparatus designed to facilitate the cutting and fitting of dresses and other garments designed to fit close to the body;
10 and it consists of a series of flexible plates, bands, strips, or forms capable of being bent to the shape of the body, said strips, forms, &c., to be provided with a series of pointed prongs; further, in securing the said strips, forms, &c.,
15 together by means of a series of elastic bands, or their equivalent, allowing said strips, &c., to be properly placed as regards position on the form or body; further, providing the elastic bands which encircle the neck and arm with
20 plates, or their equivalent, provided with projecting points; further, in a bust made of heavy paper, card-board, or other equivalent material, said bust being made by means of the system or pattern-marker, each of the seams of said
25 bust being provided with a series of projecting pointed pins corresponding to the projecting points on the pattern-marker when fitted to the body; further, in adapting the waistband to slide upon the strips, &c., to suit any
30 length of waist, and other minor details, all of which are more fully set forth in the following specification and shown in the accompanying drawings.

Heretofore pattern-markers have been constructed to simply take down or indicate the
35 measurements of the body, which were afterward traced upon a paper, which was afterward cut to correspond; but in no case, so far as I am aware, has a pattern-marker been designed to fit the body and prick the pattern
40 out upon a paper without any measurements being taken or laid out upon the paper.

The object of my invention is to produce a pattern-marker adapted to any shape or form,
45 and which will give the exact pattern for the body at one operation and sitting; and, further, to be enabled to produce by the aid of said apparatus a bust of paper or card-board upon which the dress may be fitted in the absence of the original, from which the same was
50 designed.

In the drawings, Figure 1 is a perspective view of the front and side of a lady having my improved pattern-marker applied. Fig. 2 is a perspective view of the back and side of same. 55 Fig. 3 is a perspective view of the adjustable device for the waistband. Fig. 4 is a cross-section of same. Figs. 5 and 6 show two methods of securing the projecting pins or points to elastic about the neck and armhole. Fig. 60 7 is a perspective view of the top of one strip, and shows one of the hooks to support the paper or cloth during marking. Fig. 8 is a perspective view of the paper bust. Fig. 9 shows a section of one of the seams of same. 65

A A are a series of thin flexible strips of metal, as brass, tin, copper, or other equivalent material, adapted to conform to the shape of the body. These strips correspond to the seams, and down the middle they are provided 70 with projecting points or pins I, and are secured together by elastic or flexible bands F. There are as many strips A as there are seams to the one-half the body, as it is not necessary to measure both sides; but, if desired, 75 the strips may be so arranged as to indicate all the seams. The plate G is also flexible and corresponds to the darts, and down the two vertical edges are a series of projecting pins, I, similar to those on strips A. This plate is also 80 secured to the bands F. The chest, back, and shoulder strips A are secured to the elastic collar-band C, which is provided with a series of metallic plates, J, provided with pins I, as shown in Figs. 5 and 6. An elastic band, B, 85 of similar construction encircles the arms, and to it are secured the shoulder-strip, through the agency of adjustable slide-plate D and the side and back strips, A, as shown.

The waistband E is made of an elastic band, 90 or its equivalent, and is secured to the adjustable slide-plates D, which fit upon and slide on strips A and dart-piece G. In the case of the dart-plate there is a slot therein, into which fits the plate D, which is kept from coming out 95 by bars H, but yet allow it to be adjusted vertically in the slot. By this means the waist may be raised or lowered to suit the person to be fitted. The bands F and E are extended to pass around the body and be tied, as shown; 100 or extra pieces for this purpose may be used.

At the top of each of the strips A, and at

the top, middle, and bottom of the dart-plate G, and on any other parts or in any places desired, are secured small hooks K, as shown in Fig. 7. In cutting a pattern known as the "Gabrielle" there is an extra strip, L, used, as shown in dotted lines, Fig. 1. This piece L is in all particulars the same as the other strips, being provided with the pins I, and fitting in the dart-piece G by means of a socket or other equivalent device. Also, in some cases the second back-seam is to be cut to the shoulder-strip, as shown in dotted lines M, Fig. 2. This strip is in all particulars similar to the extra strip L. The slide D allows lengthening or shortening of the shoulder-seam, as desired or required.

I do not confine myself to any number or shape of seams, as they will change as the fashion changes; neither do I limit myself to the adjustable slides or the particular method of securing them together, for my invention comprehends, broadly, any support for the projecting or marking points or pins, or their equivalent—as, for instance, depressions or holes over which a point is passed, breaking the paper at these points, so arranged as to conform to the shape of the body and correspond to the seams of the garment.

The bust form shown in Fig. 8 is made of card-board or equivalent flexible material, N, which has been perforated by the points I when on the body.

The various parts thus made, instead of being used directly as the pattern, are bent into shape by steaming or otherwise, and the two edges are lapped, as at O, and a double-pronged pin, P, is passed through the holes, and one leg is bent down to hold the seam closed and the pin in place, and the other leg is left standing to be used to mark other patterns. This is shown in Fig. 9. In this case the bust is only adapted to fit dresses to the person from which it was made, and enables that person to have the dress fitted without ever putting it on herself.

This pattern-marker is also adapted for marking out sleeves, gentlemen's coats, and all other forms where the clothes must fit the body closely.

The operation is as follows: The apparatus is placed upon the body, as shown in Figs. 1 and 2, and the bands F and E tied. The strips are then adjusted to suit the seams, the shoulder-strip is lengthened or shortened to suit, and the waist is raised or lowered to fit, and if the strips need bending to conform to the body it is done. The elastic bands F and E cause the strips to fit closely to the form. Now the paper, or, if desired, the cloth and lining,

is hooked upon the hooks K and pressed upon the pins I, which mark out a piece between any two seams, the hooks K preventing the displacement of the paper or cloth. After the marking is done the cloth is cut out a little larger than the impression to allow for the seam, which is made on the line of perforations. When the parts are sewed together the fit will be found to be perfect. In case the party cannot go to the seamstress or dress-maker, a bust is made of card-board, as previously described, and the paper or cloth is marked out from this bust precisely in the same manner as has been set forth above.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A pattern-marker which consists of bands or strips of metal corresponding to the seams, conforming to the shape of the body, and provided with a series of projecting marking-pins, substantially as and for the purpose specified.

2. A pattern-marker consisting of bands of flexible material provided with projecting pins, said bands corresponding to the seams, and pressed to the form by bands of elastic material, to which they are secured, substantially as and for the purpose specified.

3. In a pattern-marker, a seam-marker consisting of a flexible strip or plate of metal provided with projecting points or pins, upon which the paper or cloth is pressed, substantially as and for the purpose specified.

4. In a pattern-marker, flexible strips, bands, or plates of metal provided with projecting pins, said bands corresponding to the seams, and pressed to the form by bands of elastic material, and combined with a waistband secured to these strips, bands, or plates, and adapted to be adjusted thereon, substantially as and for the purpose specified.

5. In a pattern-marker, metallic strips provided with projecting pins, said strips corresponding to the seams, combined with suitable means to secure them together, and elastic adjustable neck and armhole bands provided with projecting marking-pins, substantially as and for the purpose specified.

6. In a pattern-marker, the seam-strips A and dart-plate G, of metal or its equivalent, provided with projecting pins I and hooks K, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

ANGELINE P. WICKERSHAM.

Witnesses:

R. M. HUNTER,

R. A. CAVIN.

(Model.)

M. POWER.

Wrist and Hand Support for Keyboard Instruments.

No. 240,268.

Patented April 19, 1881.

Fig. 1.

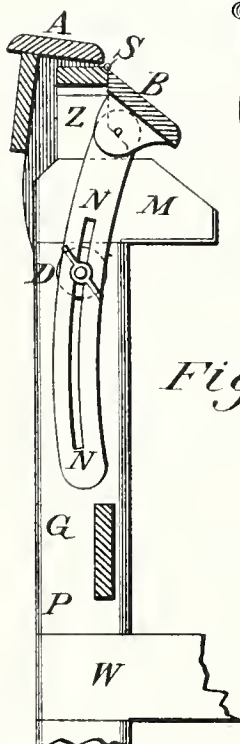
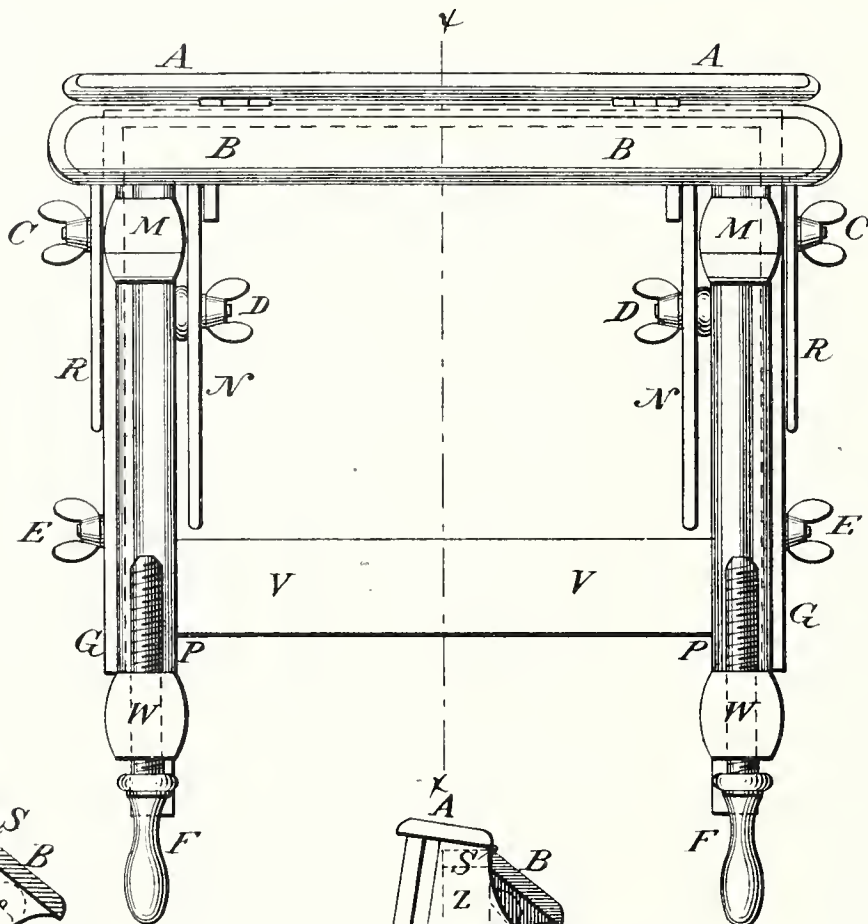


Fig. 3.

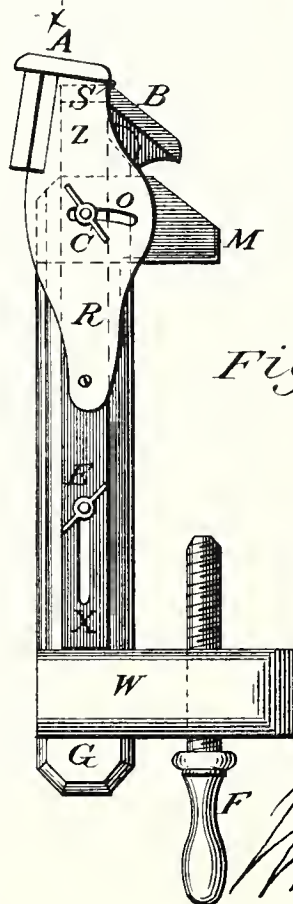


Fig. 2.

Witnesses:

A. B. Richmond
H. M. Richmond

Inventor:

Winnie Power.

UNITED STATES PATENT OFFICE.

MINNIE POWER, OF CONNEAUTVILLE, PENNSYLVANIA.

WRIST AND HAND SUPPORT FOR KEY-BOARD INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 240,268, dated April 19, 1881.

Application filed January 8, 1881. (Model.)

To all whom it may concern:

Be it known that I, Mrs. MINNIE POWER, of Conneautville, in the county of Crawford and State of Pennsylvania, and a citizen of the United States, have invented a new and Improved Attachment to Pianos, of which the following is a specification.

The object of my invention is to give the pupil a correct position of the arms and hands in playing the piano, for curving the fingers, and supporting the wrists. I attain these objects by the mechanism illustrated in the accompanying drawings.

Figure 1 is a front view of my device. Fig. 2 is an end view. Fig. 3 is a vertical transverse section on line *x x*, Fig. 1.

G G are upright supports, of wood or metal. These are connected together by the cross-piece V V at the bottom, and a corresponding one, S, at the top. The cross-piece S is shown in the drawings, the end in dotted lines in Fig. 2, and in cross-section in Fig. 3.

On the upright G is a flange, M, which is placed on the edge of the piano below the keyboard.

W is an arm with a hand-screw, F, that passes under the piano, and by which the attachment is securely fastened to the same.

Z, Fig. 2, shows an adjustable upright, of which there are two, one on each end of the device. These are connected together by the

cross-piece S. The adjustable uprights Z are attached to the uprights G G by thumb-screws E E, which pass through a slot, X, shown at Fig. 2. By means of this slot and thumb-screws the cross-piece S can be raised or lowered. To this cross-piece S is attached, by hinges, the hand-rest B B, and this hand-rest is made adjustable—*i. e.*, can be raised or lowered—by means of the slotted support N N and the thumb-screw D. (See Fig. 3.)

A A is a rest for the wrist. This rest is attached to the adjustable arm R (see Fig. 2) by the slot O and thumb-screw C, by which means the wrist-rest can be brought nearer the person of the player or the instrument, as may be desired.

By this device the wrists are supported by the rest A A, and the hand by the rest B B, both of which, by their supports and thumb-screws, are made adjustable, as described.

I claim—

The hand-guide consisting of the adjustable wrist-support A and adjustable hand-support B, in combination with the supports G G and hand-screw F, all constructed and arranged substantially as and for the purposes set forth.

MINNIE POWER.

Witnesses:

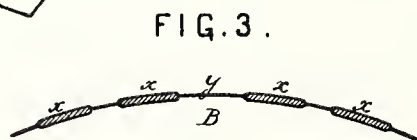
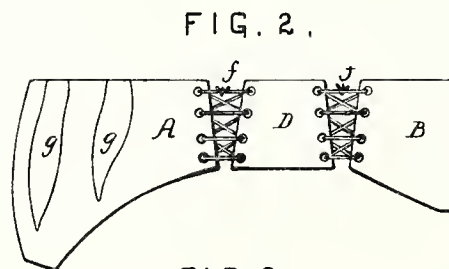
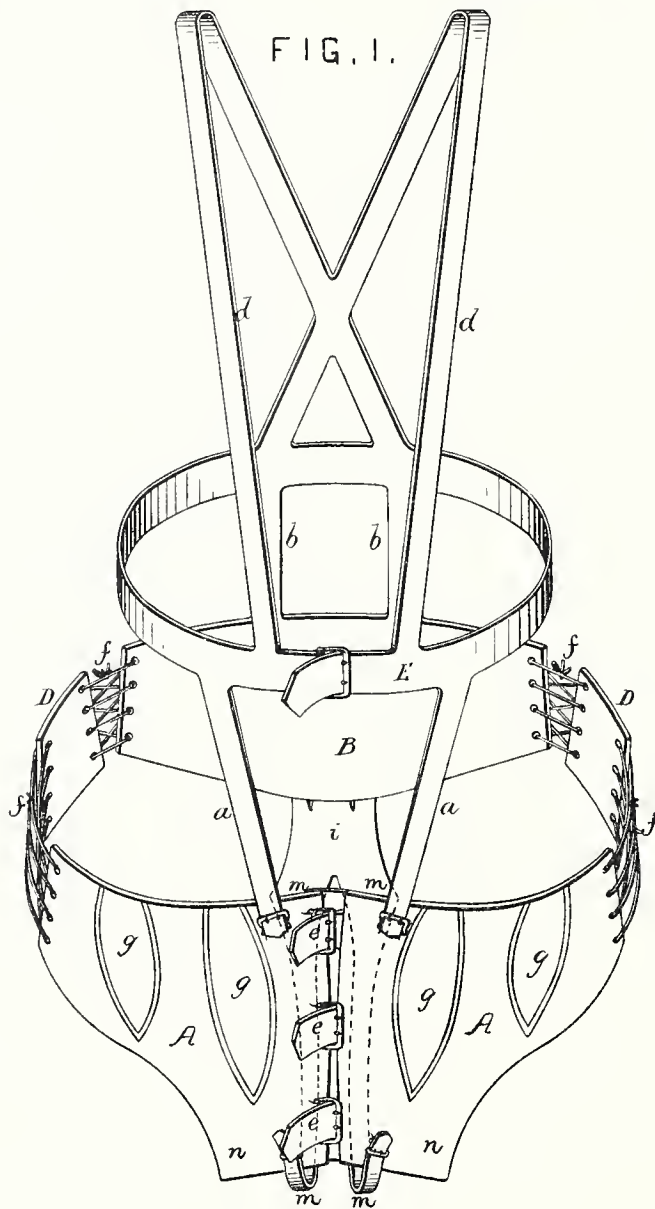
H. M. RICHMOND,
A. B. RICHMOND.

(No Model.)

E. C. GLINNING.
ABDOMINAL SUPPORTER.

No. 251,431.

Patented Dec. 27, 1881.



WITNESSES

James F. Tobin.
Henry Howson Jr.

INVENTOR

Ellen C. Glinning
by her Attorneys.
Howson and Son

UNITED STATES PATENT OFFICE.

ELLEN C. GLINNING, OF PHILADELPHIA, PENNSYLVANIA.

ABDOMINAL SUPPORTER.

SPECIFICATION forming part of Letters Patent No. 251,431, dated December 27, 1881.

Application filed April 9, 1880. (No model.)

To all whom it may concern:

Be it known that I, ELLEN C. GLINNING, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented an Improved Abdominal Supporter, of which the following is a specification.

The object of my invention is to so construct an abdominal supporter that the same will retain its proper position on the person of the wearer, and so that the abdomen will be supported without chafing or undue pressure.

In the accompanying drawings, Figure 1 is a perspective view of my improved abdominal supporter; Fig. 2, a side view, and Fig. 3 a sectional view of part of the supporter.

The supporter comprises the two front pads, A A, the rear pad, B, and the hip-pads D D, the front pads being suspended by means of straps *a a* from a waist-belt, E, from which the rear pad, B, is also suspended by straps *b b*. The waist-belt is furnished with shoulder-straps *d d*, so that the supporter is carried by the waist and shoulders. The front pads, A A, are connected together by straps and buckles *c*, and the hip pads D are connected to the front pads, A, and rear pad, B, by lacings *f*, so that by a proper adjustment of said lacings and of the straps and buckles connecting the front pads the position of the latter on the abdomen and of the pads D D on the hips can be varied as comfort suggests.

In order that the front pads, A A, may form a proper support for the abdomen they are stiffened with any suitable material, introduced as a lining; but in order to counteract the objectionable rigidity which this would cause, if the stiffening extended throughout said pads, the latter are each provided with two gores, *g*, extending from the upper edge down to, or almost to, the bottom of the pad. These gores are flexible, but inelastic, so that while they render the stiffened portions of the pads sufficiently flexible to permit the same to conform closely to the contour of the abdomen they do not exert that pressure upon the abdomen which is

an objection to the use of an elastic gore. The gores *g* are, however, contracted at and near the top, so as to exercise a confining effect upon the upper portion of the abdomen and prevent the latter from rising when the wearer of the supporter is seated.

To the center of the rear pad, B, is secured the rearend of a strap, *i*, which has two branches, *m m*, the front ends of which are connected to downward extensions, *n n*, formed on the pads A A, at and near the adjacent edges of the same. The rear pad, B, has stiffening-pieces *x x*; but in the center of said pad is a yielding portion, *y*, which rests against the spine, so that while proper pressure on the back at the opposite sides of the spine is assured the spine itself is relieved from pressure. The stiffening-pieces *x x*, moreover, serve to prevent lateral movement of the rear pad, B, and thus insure the maintenance of the entire structure in its proper position on the person, as the hip-pads and front pads cannot be moved out of position as long as lateral movement of the rear pad is impossible.

The hip-pads D are made tapering, in order to accommodate the swelling of the hips.

I do not desire to claim, broadly, a supporter consisting of front pads, a back pad, and hip-pads connected together; nor do I claim front pads having elastic gores; but

I claim as my invention and desire to secure by Letters Patent—

The within-described abdominal supporter, the same consisting of the two front pieces or pads, A A, each provided with two gores, *g g*, the hip or side pads, D D, and rear pad, B, with lacings, and the stiffening-pieces *x x*, together with shoulder-supports, all as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ELLEN C. GLINNING.

Witnesses:

JAMES F. TOBIN,
HARRY SMITH.

(No Model.)

E. HOWSON.
CORSET.

No. 245,830.

Patented Aug. 16, 1881.

FIG. 1.

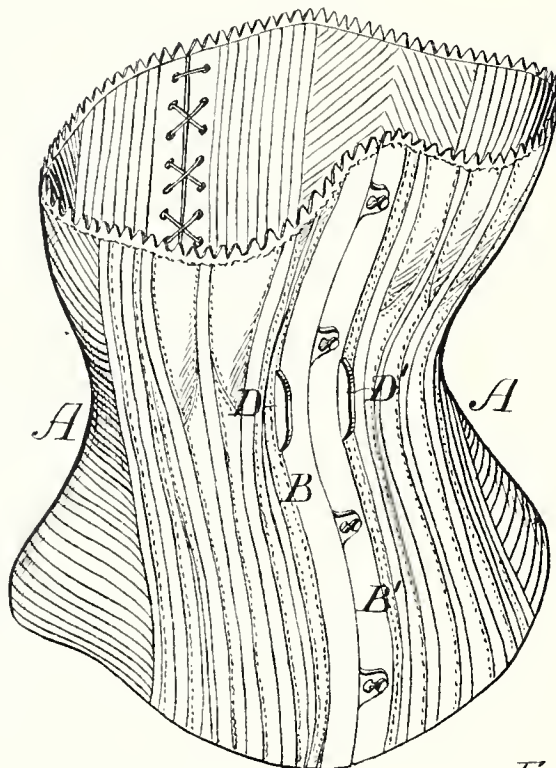


FIG. 6

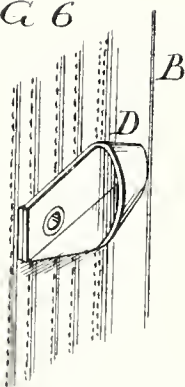


FIG. 2

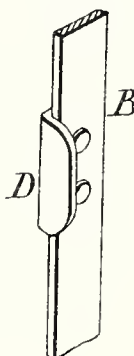


FIG. 4

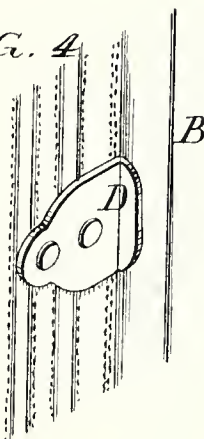


FIG. 5.

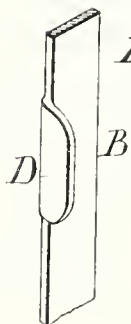


FIG. 7.

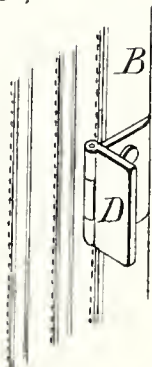


FIG. 8.

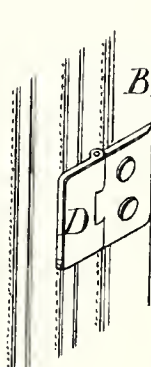


FIG. 3.



Witnesses
James F. Tobin
Henry S. Follenwider.

Inventor:
Eliza Howson
by her attorneys
Howson and Fox

UNITED STATES PATENT OFFICE.

ELIZA HOWSON, OF PHILADELPHIA, PENNSYLVANIA.

CORSET.

SPECIFICATION forming part of Letters Patent No. 245,830, dated August 16, 1881.

Application filed June 9, 1881. (No model.)

To all whom it may concern:

Be it known that I, ELIZA HOWSON, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented an Improvement in Corsets, of which the following is a specification.

The object of my invention is to afford facilities for fastening the fronts of corsets, and this object I attain by attaching at the waist portion of the corsets, either on the steels or adjacent thereto, projections against which the wearer can apply her thumbs in closing the corset to her waist.

In the accompanying drawings, Figure 1 is a perspective view of a pair of corsets illustrating my invention; Fig. 2, a detached portion of Fig. 1, drawn to an enlarged scale; and Figs. 3, 4, 5, 6, 7, and 8, modified forms of the attachment.

The corset A, Fig. 1, may be made in the usual manner for lacing at the back, and having the usual corset-steels, B B', in front, one of these steels, attached to one fold of the corset, being provided with slotted projections for fitting over studs attached to the steel of the other fold of the corset.

In fitting on corsets it is usual to first secure the two steels together at the fastening nearest to the waist, and considerable effort is required to do this, as there are no prominences for the thumbs or fingers of the hand to bear against. Frequently the thumbs are applied to the edges of the steels in forcing the two folds of the corset together; but the steels are not prominent enough to permit this to be done with any comfort; hence I attach to the corset

projections D D', to which the thumbs can be applied in fitting the corset to the body, these projections being at or near the waist, where it is usual to make the first fastening, for after the corsets are secured at the waist it is an easy matter to make the other attachments without the aid of the projections. Each projection may consist of a bent plate of metal riveted to the steel, as shown in Fig. 2, or in the manner illustrated in Fig. 3; or the projection may form part of a plate secured to the fabric, as in Fig. 4; or it may form part of the steel, as in Fig. 5; or it may consist of a simple loop of bent metal or of very strong fabric, as in Fig. 6; or it may consist of a hinge, as shown in Figs. 7 and 8, so that one leaf of the hinge may be turned up to form a projection, and turned down out of the way when the corset has been fastened. I have found, however, that the permanent projection is no obstacle to the proper fitting of the clothes to the corset, providing the projections are at or near the waist.

I claim as my invention—

The combination of the fastening devices of a corset with projections or loops D D' adjacent to the steels or fastening devices, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ELIZA HOWSON.

Witnesses:

JAMES F. TOBIN,
HARRY SMITH.

(No Model.)

H. HEY.
VERMIN TRAP.

No. 246,771.

Patented Sept. 6, 1881.

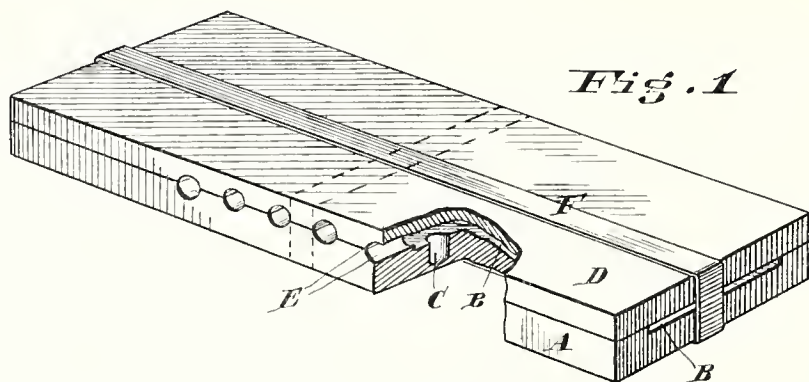


Fig. 1

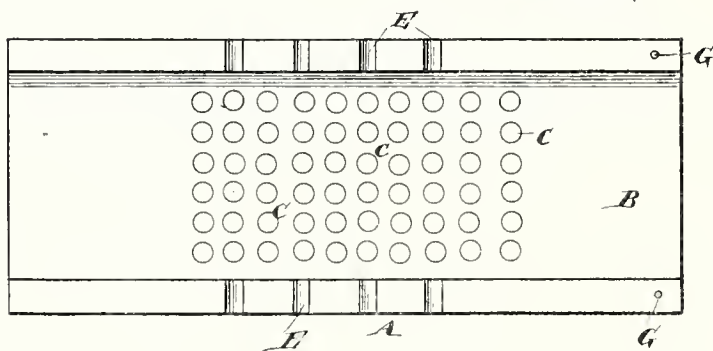


Fig. 2

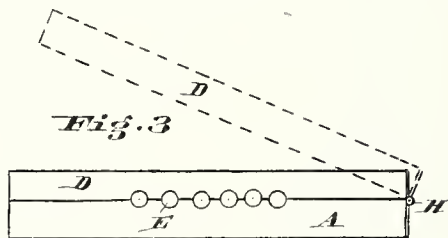


Fig. 3

Attests

W. J. Matos.
L. J. Matos.

Inventor

Hannah Hey

By her atty.

W. J. Matos.

UNITED STATES PATENT OFFICE.

HANNAH HEY, OF PHILADELPHIA, PENNSYLVANIA.

VERMIN-TRAP.

SPECIFICATION forming part of Letters Patent No. 246,771, dated September 6, 1881.

Application filed March 25, 1881. (No model.)

To all whom it may concern:

Be it known that I, HANNAH HEY, of the city and county of Philadelphia, in the State of Pennsylvania, have invented an Improvement in Traps for Catching Vermin, of which the following is a specification.

My invention has reference to traps for the removal of vermin from beds, closets, &c.; and it consists, essentially, of a block or piece of wood provided with a series of small holes or perforations, as is more fully set forth in the following specification and shown in the accompanying drawings, which form part thereof.

The object of my invention is to provide a receptacle adapted to induce vermin, such as bed-bugs, to inhabit the same, when upon removing said receptacle the vermin can be caught and killed.

In the drawings, Figure 1 is a perspective of one form of a receptacle embodying in it my invention. Fig. 2 is a plan of the lower part or body of same. Fig. 3 is a side elevation, showing the body and lid hinged together.

A is the body, and is preferably grooved at B, and the surface of said groove is perforated, as at C. A smooth or other conveniently-shaped lid, D, fits upon the body A, and the flanges on either side of the groove B may be perforated, or the perforations may be at the juncture of the lid and body, as at E. This gives access to the perforations or holes C in the body A of the receptacle. If desired, the lid also may be perforated.

The lid D when used may be secured to the body by a rubber band, F, or other equivalent

device, as by pins G, or hinged at H, or may be loose upon it.

The receptacle is placed in the bed under the mattress and close to the joints. The receptacle, being preferably of unpainted pine wood, is a more acceptable habitation than the bed, and the bugs enter the holes and perforations, and in the morning can be easily removed by knocking the same over a slop-pail, when they fall out. After once being occupied the attraction is far greater.

If desired, several of these receptacles may be placed in one bed, and the killing of a bug in a new receptacle will increase its attraction.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A trap for catching vermin, consisting of a block of wood provided with a number of small perforations or holes, substantially as shown and described.

2. A trap for catching vermin, consisting of the block of wood A, provided with holes C and flat groove B, as shown and described.

3. A trap for catching vermin, consisting of the block A, provided with small holes C and flat groove B, in combination with a cover, D, and elastic band F, substantially as and for the purpose specified.

In testimony of which invention I herewith set my hand.

HANNAH HEY.

Witnesses:

R. M. HUNTER,
LISLE STOKES.

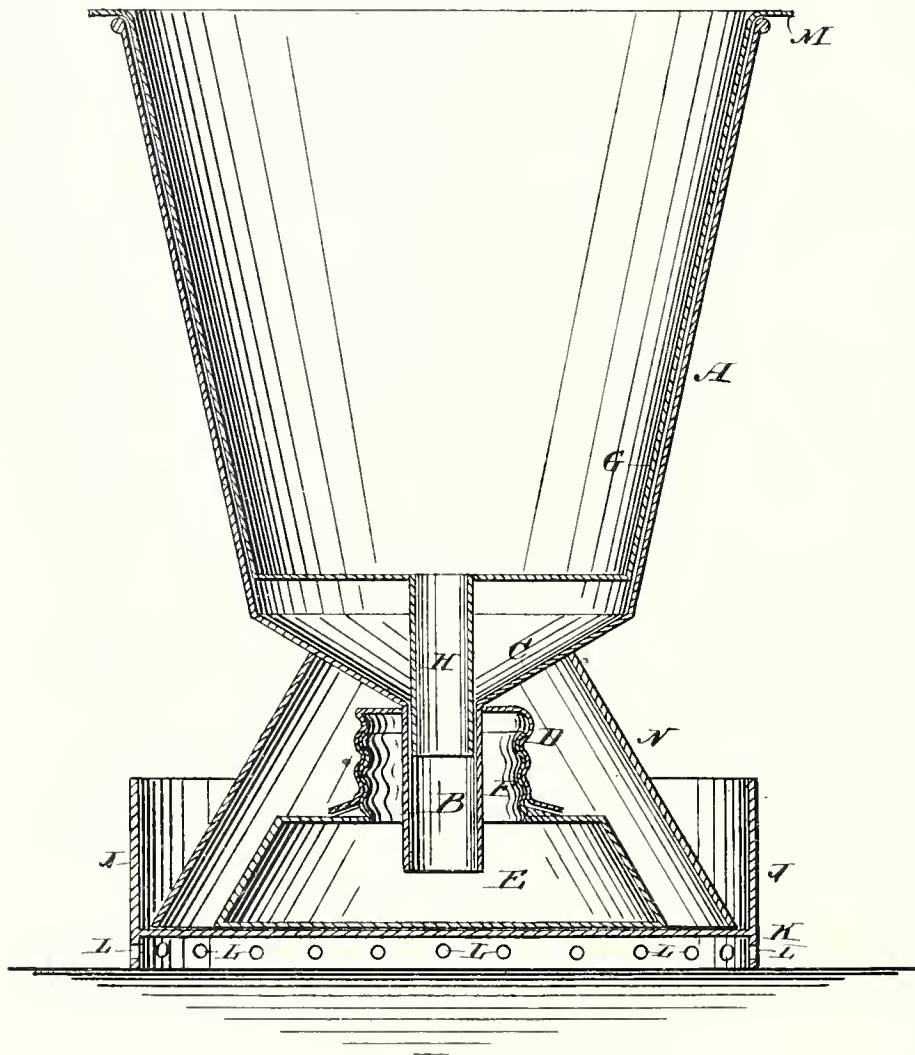
(No Model.)

A. D. POLSGROVE.

FLOWER CROCK.

No. 248,213.

Patented Oct. 11, 1881.



WITNESSES:

Francis McArde.

B. G. Underwood.

INVENTOR:

A. D. Polsgrove.

BY *Alum Ho*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

AMELIA D. POLSGROVE, OF CATAWISSA, PENNSYLVANIA.

FLOWER-CROCK.

SPECIFICATION forming part of Letters Patent No. 248,213, dated October 11, 1881.

Application filed August 23, 1881. (No model.)

To all whom it may concern :

Be it known that I, AMELIA D. POLSGROVE, of Catawissa, in the county of Columbia and State of Pennsylvania, have invented a new and Improved Flower-Crock, of which the following is a full, clear, and exact description.

The object of my invention is to prevent the surplus of water poured on a flower-pot or crock from dripping upon the flower-shelf or floor, and to prevent dampness from collecting under the saucer of the flower-crock.

A further object of my invention is to prevent the rapid destruction of the flower-crock by rust.

Reference is to be had to the accompanying drawing, forming part of this specification. A longitudinal sectional elevation of my improved flower-crock is shown.

The flower-crock A, which is preferably so constructed that its diameter decreases toward the bottom, is provided with a tube, B, projecting downward from the bottom C of the crock. A screw-collar, D, surrounding the tube B is fastened to the under side of the bottom C. A cup, E, or similar vessel is provided with a screw-collar, F, which is of such size that it can be screwed into the screw-collar D.

A lining, G, provided with a flange, M, at its upper end, made of galvanized or glazed sheet-iron or other suitable material, fits closely in the crock A, and is provided in its bottom with a downward-projecting tube, H, fitting in the tube B.

The saucer J is provided with a downward-projecting rim or flange, K, provided with perforations L below the bottom of the saucer.

The screw-collar F of the cup E is screwed into the screw-collar D, whereby the cup E will be held to the bottom C of the crock A, the tube D projecting into the cup E, which is concealed by the base N of the crock. The earth and the flower-roots are contained in the lining G, which is placed into the crock, the tube H passing into the tube D. If water is poured upon the earth in the crock or its lining G, the surplus water which is not absorbed by the earth drips through the tubes H and B, and is collected in the cup E, and thus this water cannot soil or

moisten the floor or flower shelf or stand. As the earth is contained within the lining the crock will not be moistened or soiled, and will not be destroyed by rust. Furthermore, the plants can be transplanted or interchanged very easily, as the lining G containing the plants (or, in place of the lining, an ordinary flower-pot) can be placed into the crock A.

The perforations L permit a circulation of air under the bottom of the saucer J, and thereby accumulation of moisture under the saucer is prevented.

Hanging flower crocks or vases can also be constructed in the manner described above.

The crock A may be used with or without a lining; but I prefer to use the lining or an equivalent therefor, as it prevents the rapid destruction of the crock.

The cup E can be removed or unscrewed very easily if the water contained therein is to be poured out.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the pot A, having tube B and base N, the lining G, provided with tube H, and the cup E, as shown and described.

2. The combination, with the flower crock or pot A, provided with a screw-collar, D, of the cup E, provided with a screw-collar, F, substantially as herein shown and described, and for the purpose set forth.

3. The combination, with the flower crock or pot A, provided with a screw-collar, D, and a tube, B, of the cup E, provided with a screw-collar, F, substantially as herein shown and described, and for the purpose set forth.

4. The combination, with the flower pot or crock A, of the lining G, provided with a tube, H, projecting from its bottom, substantially as herein shown and described, and for the purpose set forth.

AMELIA D. POLSGROVE.

Witnesses :

B. R. DAVIS,
GEO. THOMAS.



(No Model.)

E. WEYL.
Ironing Table.

No. 237,791.

Patented Feb. 15, 1881.

FIG. 1.

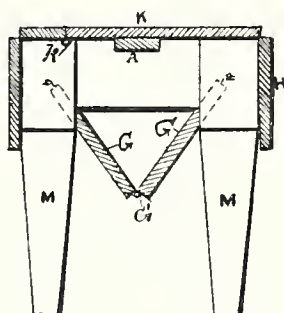


FIG. 2.

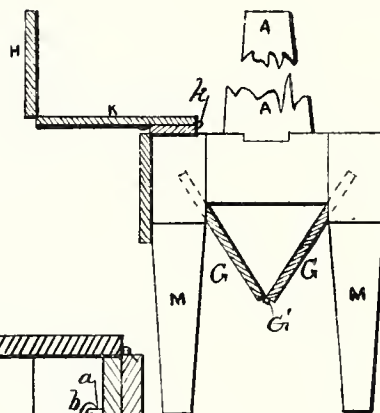


Fig. 4.

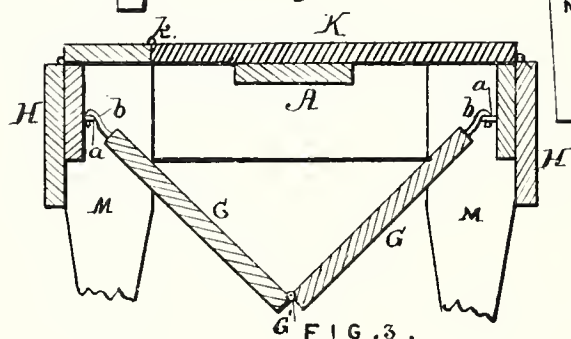
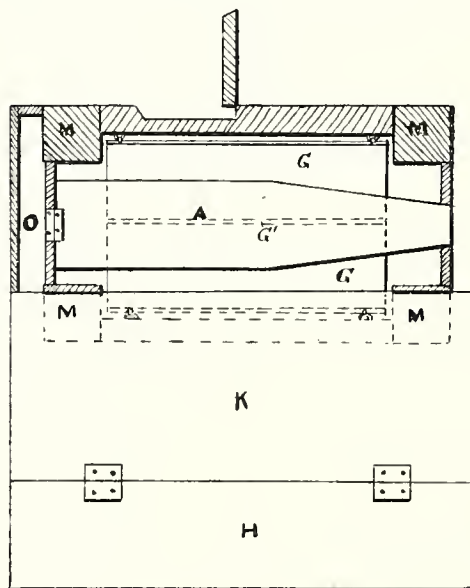


FIG. 3.



WITNESSES:

H. M. Richmond,
L. L. Richmond

INVENTOR:

Elizabeth Weyl

UNITED STATES PATENT OFFICE.

ELIZABETH WEYL, OF VALLONIA, PENNSYLVANIA.

IRONING-TABLE.

SPECIFICATION forming part of Letters Patent No. 237,791, dated February 15, 1881.

Application filed May 1, 1880. (No model.)

To all whom it may concern:

Be it known that I, ELIZABETH WEYL, a citizen of the United States, resident at Vallonia, in the county of Crawford, State of Pennsylvania, have invented a new and useful Ironing-Table, of which the following is a specification.

My invention relates to improvements in tables and boards for ironing clothes, and is a breakfast-table and ironing-board combined. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents an end view with the top of the table down in the form of a common "fall-leaf table." Fig. 2 represents an end view of the table with the top and leaf turned back, showing the ironing-board A A. Fig. 3 represents a top view of my table, showing the table-top K and the fall-leaf turned back, with the ironing-board A in place for use. Fig. 4 represents a vertical sectional view of my improvement on an enlarged scale, showing the manner of attaching the removable hinged guard.

The ironing-board A is hung at the wide end by a hinge to the frame of the table, so that it can be lifted up and inserted into the garment to be ironed. K, the top of the table, is hinged to the frame of the table and to the leaf H, so

that it can be turned back, as shown in the drawings. (See Figs. 3 and 2.)

G G represent the hinged removable guard, which serves to keep the under side of the garment being ironed from contact with the floor. To the inside frame of the table (best seen in Fig. 4) are arranged eyes or staples *a*, which receive the hooks or bolts *b* of the guard G G, whereby it may be readily attached or detached to or from the table, as occasion may require. This guard G G is hinged at G'; but any known and suitable fastening may be used in lieu of the fastenings *a b*, so that the guard may be easily removable.

O is a receptacle in the end of the table, to hold a cloth on which the iron is to be wiped, and also an "iron-stand." M M M M represent the table-legs.

The boards G can be unhooked from the table-frame and removed, if desired.

I claim—

In combination with an ordinary leaf-table, having its top K hinged at *k*, the ironing-board A and the hinged guard G G, attached to the inside of the table-frame and made removable, as and for the purpose described.

ELIZABETH WEYL.

Witnesses:

H. M. RICHMOND,
L. L. RICHMOND.





“Queen”

Lifter, Holder and Opener

For all kinds of Jars and Cans containing
CANNED GOODS.

INVENTED BY

Miss Ella B. Hart,

STRASBURG,

LANCASTER COUNTY, PENNA.

Lease



22 N. QUEEN ST.
LANCASTER, PA.

(No Model.)

H. A. BLANCHARD.
SEWING MACHINE NEEDLE.

No. 252,992.

Patented Jan. 31, 1882.



FIG. 1.

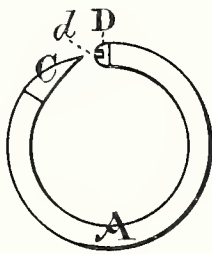


FIG. 2.

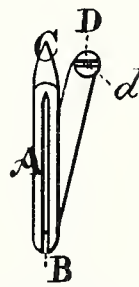


FIG. 3.

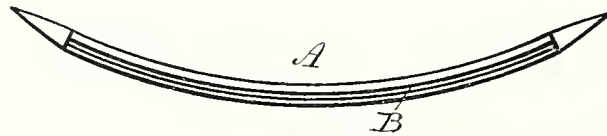


FIG. 4.

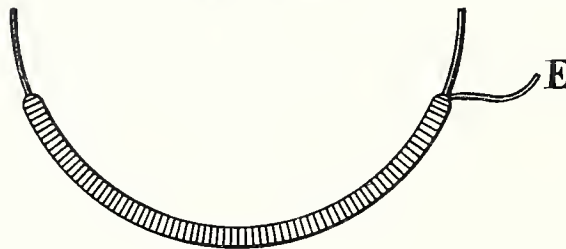


FIG. 5.

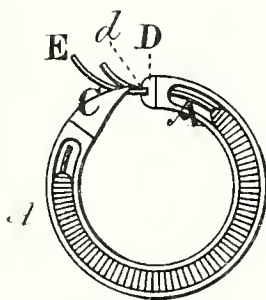


FIG. 7.

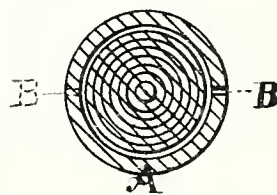


FIG. 6.

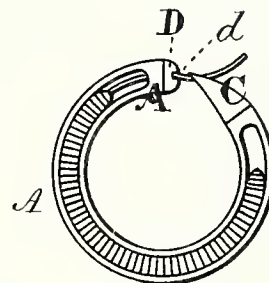


FIG. 8.

WITNESSES:

INVENTOR:

Chas H. Kimball.
Wm J. Goodwin.

Helen A. Blanchard.

UNITED STATES PATENT OFFICE.

HELEN A. BLANCHARD, OF PHILADELPHIA, PENNSYLVANIA.

SEWING-MACHINE NEEDLE.

SPECIFICATION forming part of Letters Patent No. 252,992, dated January 31, 1882.

Application filed November 5, 1880. (No model.)

To all whom it may concern:

Be it known that I, HELEN A. BLANCHARD, of the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Sewing-Machine Needles, of which the following is a specification.

The object of my invention is to provide a hollow needle which will contain a considerable quantity of thread, and also to provide for filling such a needle with thread in a package.

In the accompanying drawings, which illustrate my invention, Figure 1 is a view of a straight hollow slotted needle pointed at both ends. Fig. 2 is a side elevation of my curved needle complete. Fig. 3 is a front elevation of the same. Fig. 4 represents a needle exactly like that shown in Fig. 1, except that it is slightly bent like a bow. Fig. 5 shows a bobbin composed of a small flexible wire wound with thread to be inserted into my needle. Fig. 6 is an enlarged section of my needle filled with thread, showing an extra slot, B, in dotted lines, which may be provided, if desired. Fig. 7 is a side elevation, partly in section, showing the needle with the thread-bobbin inserted. Fig. 8 is a similar view with the flexible wire drawn out and the needle left filled with a package of thread ready for use.

A indicates the tubular part of the needle, which may be formed of small coiled brass or other metallic tubes, and provided with a slot, B, the purpose of which is to enable the thread to be packed into the needle by the use of a pin, bodkin, or any other small instrument. The front end of the needle is provided with a steel point, C, and the rear end with a screw-plug, D, or any suitable cap, stop, or abutment having an eye or thread hole, *d*. The thread for filling this hollow needle may be prepared in suitable cops, bobbins, or packages by winding it on small flexible wire, as illustrated in Fig. 5, with the end E loose, so that it can be drawn off, in a manner somewhat like unraveling knit work, by a slight pull. The screw-plug D being removed, this thread package can readily be inserted into the hollow needle and pressed in until it

fills the internal cavity. Thus a very long line of thread can be inserted. The wire is then withdrawn and the end E is threaded through the eye-hole *d* of the screw-plug, and it is screwed into place in the rear end of the needle, and the needle is then ready to be applied in any suitable rotary sewing-machine.

I am aware that it is not new, broadly speaking, to wind yarn or thread upon a wire or piece of metal. This has been done to form bobbins, the central metal portion to act as an axis in the unwinding of the bobbins, and therefore being straight and rigid, and thus totally different from my flexible bobbin for filling a hollow needle, and incapable of serving its purpose, both on account of the necessary size and the rigidity of the central metallic core.

I am also aware that wires have been insulated for electrical purposes by being covered with a woven, wound, or knit coating composed of yarns or threads, and that wires have also been wound with threads to form hat and bonnet wires; but in such cases it is not contemplated that the wire shall be pulled out, nor can it be; and hence neither a bonnet-wire nor an electrical wire, even if cut up in short sections, would serve the purpose of my peculiar bobbin, which is so wound upon slight flexible wire as to permit the wire to be readily drawn out of the needle, leaving it packed with the thread only. Nor is an electrical wire or a bonnet or hat wire ever wound with sewing-thread. I therefore disclaim the rigid straight rotary bobbins referred to, and all covered wires for electrical purposes and hat and bonnet wires.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the coiled slotted tube A with the point at the front end and screw plug or cap at the rear end, substantially as described.

2. A bobbin for filling a hollow needle, consisting of a small flexible wire wound with thread, substantially as and for the purpose described.

3. The needle pointed at one end, and provided with an eye for the delivery of the thread from the coil of thread within it, and

with an abutment to retain the coil in position within the needle, substantially as described.

5 4. That improvement in the method of filling a hollow needle with a coil of thread which consists in winding the thread on a flexible core to form a bobbin, inserting the said bob-

bin in the hollow needle, and then withdrawing the flexible core, leaving the coil of thread therein, substantially as described.

HELEN A. BLANCHARD.

Witnesses:

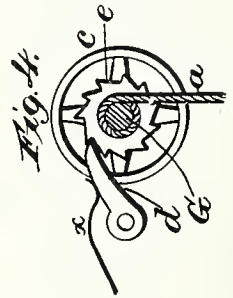
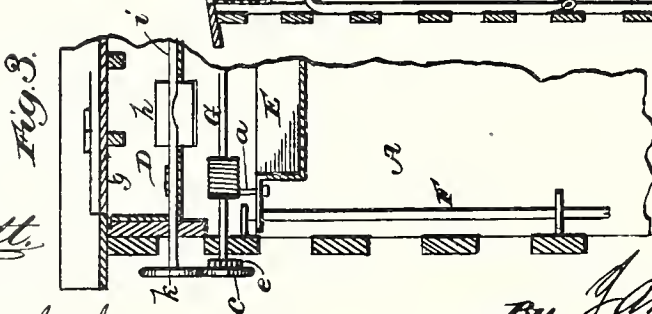
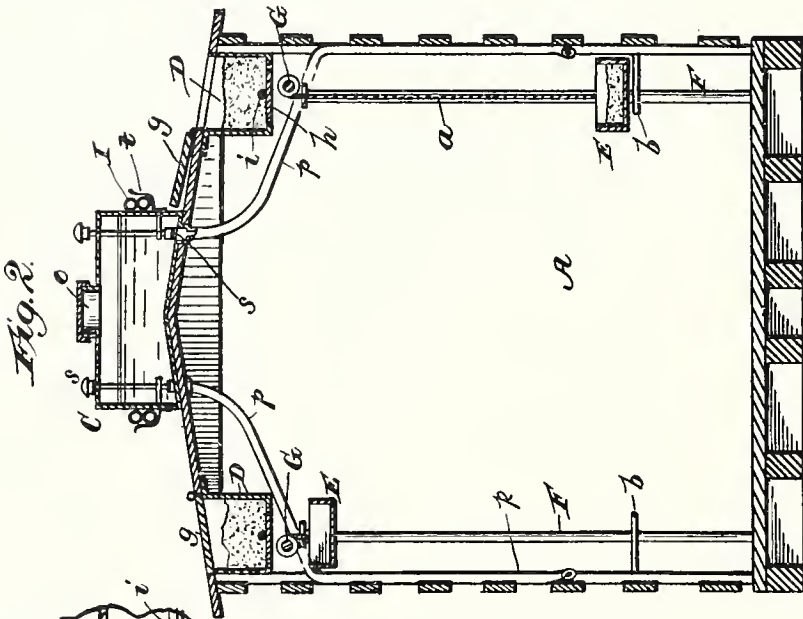
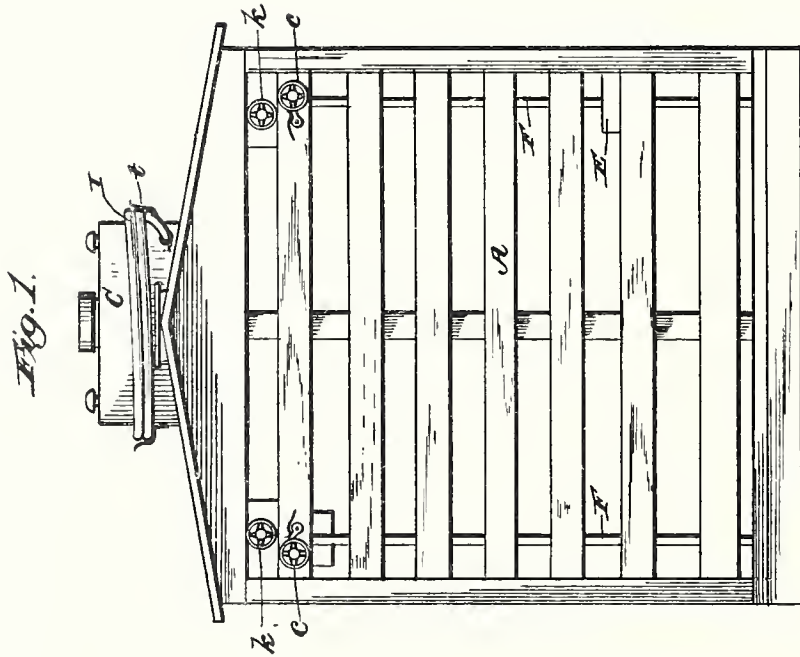
CHARLES F. LIBBY,
HARRY R. VIRGIN.

A. K. PENTZ.

STOCK CAR.

No. 254,442.

Patented Feb. 28, 1882.



Witnesses.
Phit Curlett.

J. A. Rutherford

Inventor.
Annie K. Pentz.

By James L. Norris.
Atty.

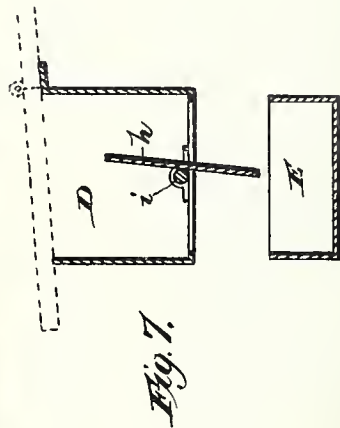
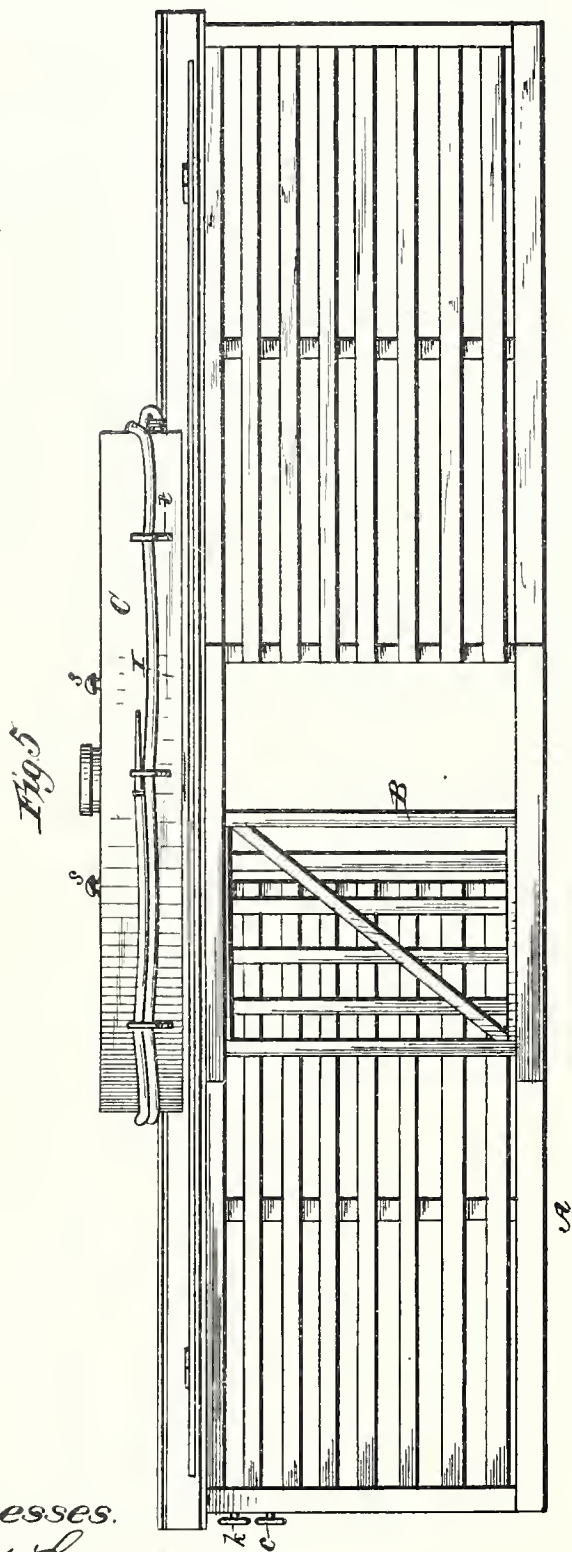
(No Model.)

2 Sheets—Sheet 2.

A. K. PENTZ.
STOCK CAR.

No. 254,442.

Patented Feb. 28, 1882.



Witnesses.

Robert C. Givett.
J. A. Rutherford.

Inventor:
Annie K. Pentz.

By *James L. Norris.*
Atty.

UNITED STATES PATENT OFFICE.

ANNIE K. PENTZ, OF CLEARFIELD, PENNSYLVANIA.

STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 254,442, dated February 28, 1882.

Application filed January 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, ANNIE K. PENTZ, a citizen of the United States, residing at Clearfield, in the county of Clearfield and State of Pennsylvania, have invented new and useful Improvements in Stock-Cars, of which the following is a specification.

My invention relates to cattle-cars; and it consists in certain peculiarities of construction whereby the feeding and watering of stock are facilitated while in transit.

It also consists in an arrangement of devices for cleansing the animals, thus contributing to their comfort in hot weather and reducing the mortality usually incident to the transportation of cattle. This is accomplished by means of the devices illustrated in the annexed drawings, in which—

Figure 1 is an end elevation of my improved cattle-car. Fig. 2 is a transverse section. Fig. 3 is a partial longitudinal section. Fig. 4 is a detail of ratchet mechanism. Fig. 5 is a side elevation of car. Fig. 6 is a plan of a feed-bin, and Fig. 7 is a transverse section of feed-bin and trough.

Like letters indicate like parts in the several views.

A indicates the car-body, which may be of any suitable or preferred construction, and B are sliding doors. Upon the top of the car, in its central longitudinal line, is a water-trough, C, and on each side, beneath the roof, is a feed-bin, D. Beneath these feed-bins are arranged the adjustable troughs E E, one on each side of the car. These troughs are flanged at their ends, and the flanges are notched or perforated for engagement with vertical guide-rods F F, by means of which the troughs are steadied while being raised and lowered. The troughs E are suspended from horizontal rods G G by means of ropes or chains *a*, and when lowered rest on suitable supports, *b b*, which project inward from the sides of the car. By turning a hand-wheel, *c*, at one end of the rod G, which rod may project at both ends of the car and be provided at each end with such wheel, it will be seen that the chain or rope *a* will be wound upon a reel or spool secured to the rod within the car, thus raising the trough, or may be unwound so as to lower the trough. The troughs may be thus elevated when it is de-

sired to have them out of the way, and also for convenience in filling them from the feed-bins. In order to hold the troughs at the top or at any desired elevation, a pawl, *d*, is arranged to engage with a ratchet, *e*, which may be secured to the rod G, or may be formed on the hand-wheel *c*, the pawl being held to its engagement by means of a spring, *f*, as shown in Fig. 4.

The feed-bins are provided with hinged covers *g*, and in the bottom of each bin is a series of rectangular openings, which are governed by correspondingly-formed valves *h h*, arranged upon a rod that extends from end to end of the bin. This rod is provided at one or both ends with a hand-wheel, *k*, by means of which it is adapted to be rotated in its bearings *m*, so as to permit the passage of feed to the trough E, suspended beneath the bin. It will be seen that the valves can thus be operated simultaneously from either end of the car and the food distributed uniformly in the trough.

The water-tank C is provided with an inlet, *o*, through which water may be introduced by any convenient means. It is also provided with pipes *p p*, which extend to each side of the car and are adapted to deliver water to the troughs E when required. The flow of water through the pipes *p p* is regulated by means of drop-valves *s s*, the handles of which project through the top of the tank C, so that they may be readily raised or dropped to govern the flow of water through the pipes leading to the troughs.

At one end of the trough C is a nozzle for the attachment of a hose, I, that may be conveniently employed for cleansing or cooling the confined cattle during transportation in hot weather, thus greatly tending to diminish the mortality incident to long journeys in close and uncleanly quarters. The hose I will also be useful in cleansing the cars when unoccupied or for extinguishing fires ignited by sparks from the engine or other causes. When not in use the hose I is coiled around the tank and supported on cleats or hooks *t t* secured thereto.

The devices herein described may be readily attached to stock cars of the ordinary construction with but little trouble or expense, and will contribute largely to the health and com-

fort of the animals, as well as economize the labor required to provide them with adequate supplies of food and water.

What is claim is—

5 1. In a stock-car, a feed-bin arranged beneath the roof and having its bottom wall constructed with openings, in combination with a rod, *i*, extending longitudinally along the said feed-bin and journaled in bearings thereon, so
10 as to be capable of rotation, and valves *h*, attached to said rod and rotated by the movement of the latter, for opening and closing the openings in the bottom wall of the bin, substantially as described.

2. In a stock-car, the combination, with feed- 15 bins, arranged on each side beneath the roof and provided with openings governed by valves adapted to be simultaneously operated, of adjustable troughs suspended beneath said bins and adapted to be secured at any desired eleva- 20 tion, substantially as shown and described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ANNIE K. PENTZ.

Witnesses:

JAMES L. NORRIS,

JAMES A. RUTHERFORD.

(No Model.)

E. E. HALE.
STOCKING KNEE PROTECTOR.

No. 267,520.

Patented Nov. 14, 1882.

Fig. 1.

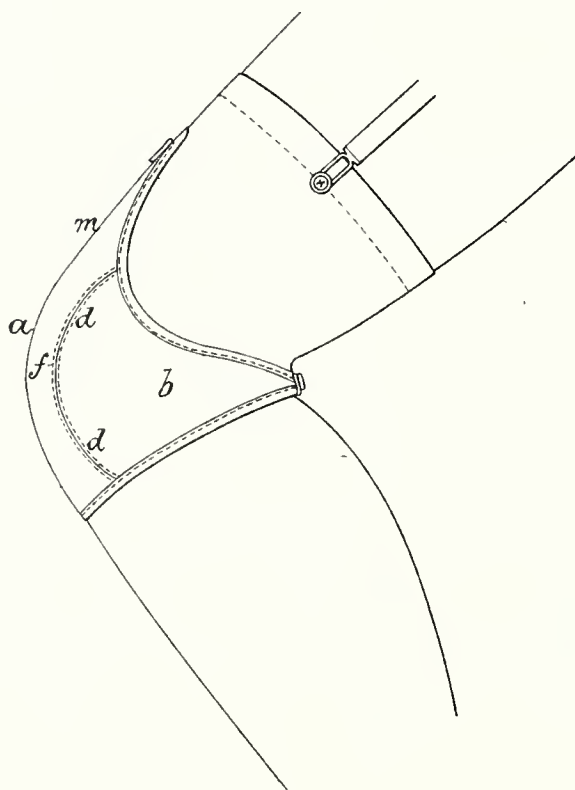
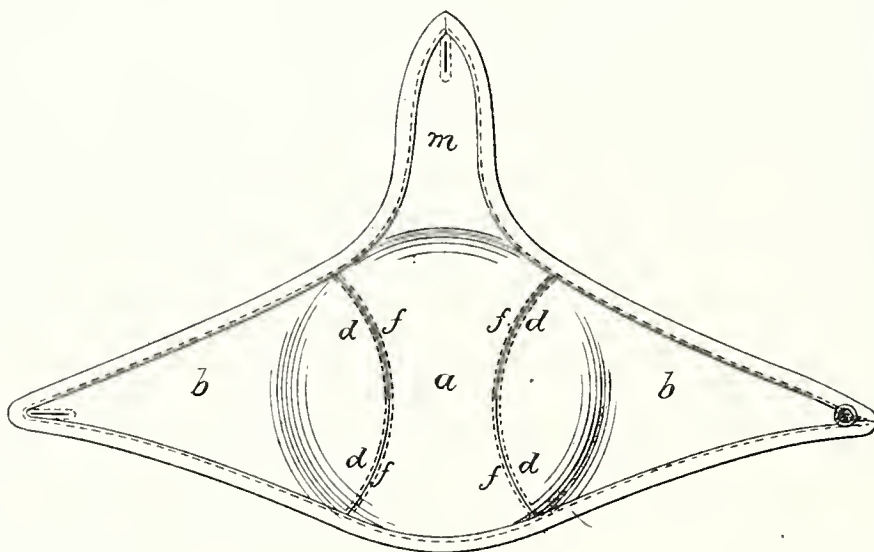


Fig 2.



Witnesses
David S. Williams
Harry Drury

Inventor
Emma E. Hale
by her Attorneys
Howson and Jones

UNITED STATES PATENT OFFICE.

EMMA E. HALE, OF PHILADELPHIA, PENNSYLVANIA.

STOCKING-KNEE PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 267,520, dated November 14, 1882.

Application filed February 6, 1882. (No model.)

To all whom it may concern:

Be it known that I, EMMA E. HALE, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented an Improvement in Stocking-Knee Protectors, of which the following is a specification.

The object of my invention is to provide a cheap and effective protector for the knees of children's stockings; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a view showing the protector applied to the knee of the stocking, and Fig. 2 a view of said protector detached and spread out in order to show the construction of the same.

The protector consists of a central piece, *a*, and two side pieces, *b b*, the latter being tapered, and their wide or front edges, *d*, being made of convex shape and secured to the concave edges *f* of the central piece, *a*. (See Fig. 2.) By thus shaping the parts a perfectly snug fit of the protector to the knee of the stocking can be effected, as shown in Fig. 1, the ends of the side pieces, *b b*, being joined in the bend of the knee and secured by the button and button-hole or other equivalent fastening. In order, however, to prevent the slipping of the protector down onto the calf of the leg, I provide the central piece, *a*, with an extension, *m*, in which is a button-hole adapted to a button on the stocking, the latter being supported as

usual, so that the protector, when in use, is always held in proper position on the cap of the knee, and the stocking is effectually prevented from becoming worn at this point.

The protector may be made of strong cloth, that preferred being a felted fabric, as the latter is well calculated to retain the shape imparted to it and to resist the rough usage to which it is subjected.

I claim as my invention—

1. The within-described stocking-protector, comprising the central piece, *a*, with concave edges *f*, the side pieces, *b b*, having convex edges *d*, united to said concave edges *f*, and a fastening device adapted to unite the free ends of the side pieces, *b*, in the bend of the knee, as set forth.

2. The within-described stocking-knee protector, comprising the central piece, *a*, with concave edges *f* and upwardly-projecting tongue *m*, constructed for direct attachment to the stocking, the side pieces, *b b*, with convex edges *d*, united to the edges *f*, and a fastening adapted to unite the free ends of the side pieces, *b*, in the bend of the knee, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EMMA E. HALE.

Witnesses:

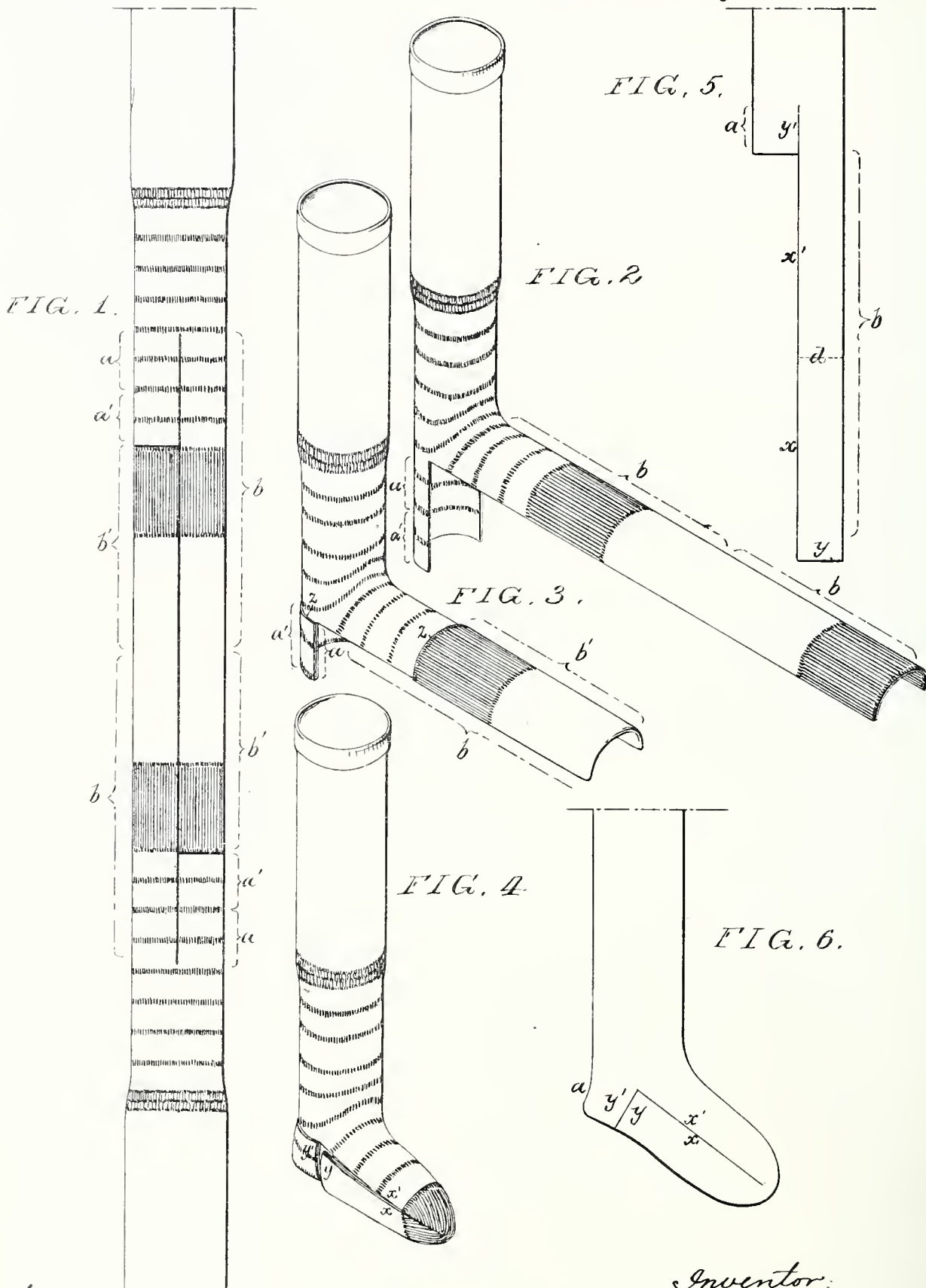
HARRY DRURY,
HARRY SMITH.

(No Model.)

C. APPLETON.
STOCKING.

No. 260,922.

Patented July 11, 1882.



Witnesses:
James F. Tobin
Harry Drury

Inventor:
Celara Appleton
By her attorneys
Howson and Jones

UNITED STATES PATENT OFFICE.

CLARA APPLETON, OF BRISTOL, PENNSYLVANIA.

STOCKING.

SPECIFICATION forming part of Letters Patent No. 260,922, dated July 11, 1882.

Application filed February 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, CLARA APPLETON, a citizen of the United States, residing in Bristol, Bucks county, Pennsylvania, have invented an Improvement in the Manufacture of Cut Stockings, of which the following is a specification.

The object of my invention is to so cut stocking-blanks from tubes or webs that there will be a double thickness of fabric at the heel and throughout portions of the foot; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a view of a tubular web of knitted fabric, showing how blanks are cut therefrom for the manufacture of my improved stocking. Figs. 2, 3, and 4 are perspective diagrams illustrating the various stages in the manufacture of stockings from said blanks; Fig. 5, a view of a stocking-blank cut in the usual manner, and Fig. 6 a view of a stocking made therefrom.

In making ordinary stockings from tubes of knitted fabric blanks are cut, as shown in Fig. 5, so as to present a projecting heel portion, *a*, and foot portion *b*, and the latter is then folded on the central line, *d*, the edges *x* united to the edges *x'*, and the edges *y* to the edges *y'*, of the heel-projection *a*. This forms a stocking with a foot and heel having a single thickness of fabric throughout.

The object of my invention is to so cut a tube or web of knitted fabric as to provide double thicknesses of fabric at such parts of the stocking as may be necessary, in order to resist wear or serve as a better protection from the cold.

The mode of carrying out my invention is to cut the tube so that the foot and heel portions of the stocking-blank will be longer than usual. Thus on reference to Figs. 1 and 2 it will be seen that the heel portion *a* has a surplus, *a'*, and the foot portion *b* a surplus, *b'*. These surplus portions are then folded over and secured to the main heel and foot portions at *z*, as shown in Fig. 3, the surplus portion *a'* of the heel entirely overlapping the main portion of the same, and the surplus portion *b'* of the foot overlapping the main portion to the extent shown, so that when the blank is again folded, as shown in Fig. 4, and then seamed at the edges *x x' y y'*, as usual, the heel, sole, and toe of the foot will have a double thickness

of fabric, and the stocking will consequently be warmer and more durable than one made in the usual manner with a single thickness of fabric throughout.

It should be observed here that Figs. 2, 3, and 4 represent the stockings turned inside out, as usual, during the process of manufacture.

My invention is of great advantage in making that class of stockings in which the tube has at intervals bands of a color differing from that of the main portion of the tube, so as to make a stocking with a toe differing in color from the rest of the foot. To produce such a stocking the tube has to be made as shown in Fig. 1, the wide shaded bands representing the toe portions, and in cutting ordinary stocking-blanks from such a tube great waste of fabric results—a waste which is entirely overcome by my invention.

Although I have described my invention in connection with tubes of knitted fabric, it can be applied to the cutting of stocking-blanks from single flat webs of fabric.

I have described my invention as applied to stockings; but it will be evident that this term includes socks as well.

I claim as my invention—

1. A cut stocking in which the foot portion *b* is combined with a supplementary strip, *b'*, united to the foot at the edge *z*, adapted to form a lining for the toe and sole, and united to the heel of the stocking with said sole, all substantially as specified.

2. The mode herein described of forming a double heel on a cut stocking, said mode consisting in cutting the heel *a* with a surplus portion, *a'*, folding said surplus portion up onto the heel, and uniting it thereto at the upper edge, *z*, as set forth.

3. The mode herein described of forming a double toe and sole on a cut stocking, said mode consisting in cutting the foot *b* with a surplus portion, *b'*, adapted to form said toe and sole, folding said surplus portion over the foot, and uniting its edge *z* thereto, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CLARA APPLETON.

Witnesses:

SALLIE PEARSON,
KATE R. WILSON.



(No Model.)

M. E. BEASLEY.

LIFE RAFT.

No. 258,191.

Patented May 16, 1882.

Fig. 1.

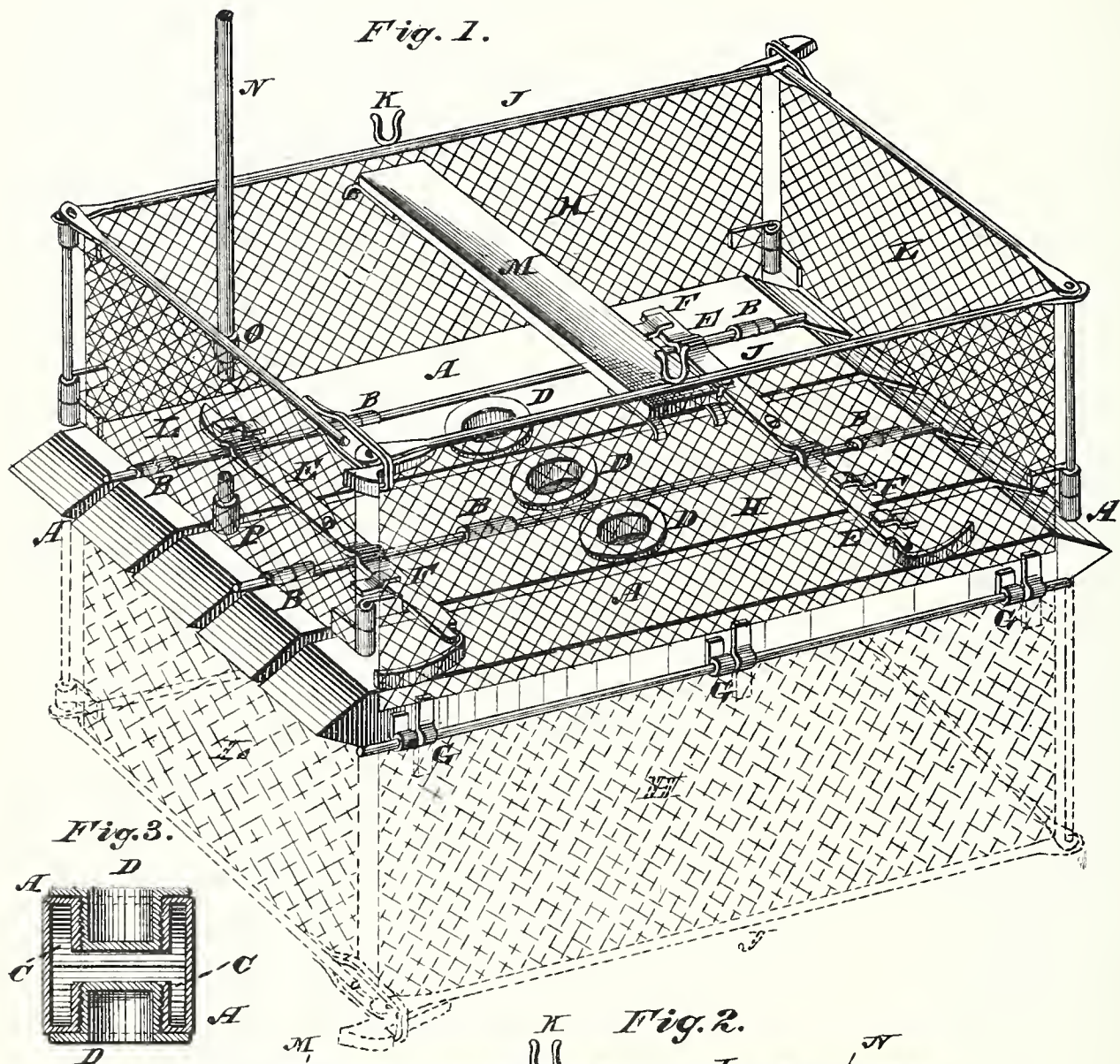


Fig. 3.

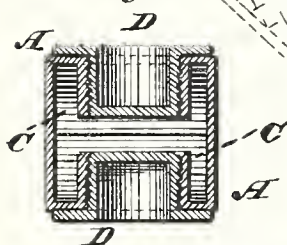
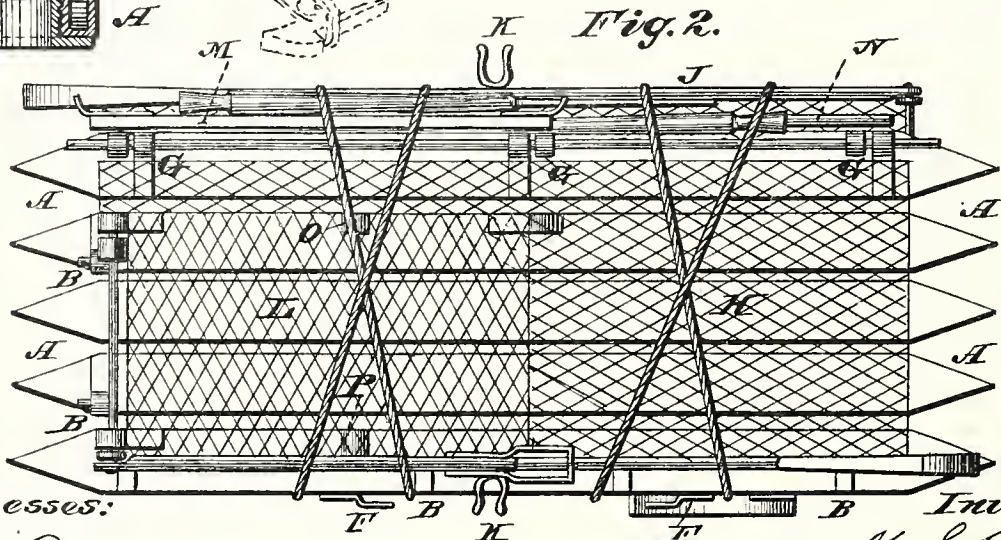


Fig. 2.



Witnesses:

P. H. Dieterich
Geo. Pinkenburg

Inventor:

M. E. Beasley
per
Lloyd Wigand Att'y

UNITED STATES PATENT OFFICE.

MARIA E. BEASLEY, OF PHILADELPHIA, PENNSYLVANIA.

LIFE-RAFT.

SPECIFICATION forming part of Letters Patent No. 258,191, dated May 16, 1882.

Application filed January 17, 1881. (No model.)

To all whom it may concern:

Be it known that I, MARIA E. BEASLEY, of the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Life-Saving Rafts for Use in Case of Shipwreck; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable others skilled in the art to make and use the said invention.

The object of this invention is to improve the raft described and claimed in my Letters Patent of the United States numbered 226,264, and dated April 6, 1880, so that it may be more readily used.

The nature of my invention may be briefly stated to consist in making the ends of the floats of the raft with a bevel upon both sides, attaching the railings by hinges so constructed as to be erected securely upon either surface, and in forming doors and stoppers for the water and provision compartments that may be opened upon either side, in addition to which I sometimes make the railing double, so that in the event of its being overturned in the water it can be instantly used without any delay in righting or adjusting it.

I will now proceed to particularly describe the construction and operation of my invention, referring in so doing to the drawings annexed and the letters of reference marked thereon.

Figure 1 shows the invention in perspective as when in use. Fig. 2 shows the invention as folded for stowing; Fig. 3, a float in section in middle transverse.

A are flat rectangular metallic floats, having both sides of the ends beveled. These are fastened to each other by hinges B. In some or all of these floats A are formed cavities or chambers C, provided with stoppers D, holding provisions, accessible upon both sides of the floats. Bars E are pivoted upon both sides of the floats and engage in hooks F, fastened firmly to the sides of the other floats, and when engaged in the hooks F the bars E hold the floats in the same flat plane, and when turned in parallel position with the floats A the bars E make no impediment in the folding of the raft, the positions of the pins of the hinges B being in such relation to the upper surfaces of the floats A that a space adequate to receive the bars E and hooks F is provided when the floats A are folded. Upon the sides of the

outer floats are hinges G, capable of turning in both directions, either upward or downward, attaching a grated railing, H, provided with a strong upper rail, J, with rowlocks K thereon. At the opposite end of each of the railings H are hinged gates L, made also of gratings, which, fastening to the other end of the opposite railing or grating H, form a complete rectangular inclosure. The railings and gates may be made double, so that one set may be turned upward while the other is downward. (Indicated in the dotted portion of Fig. 1.) The construction may be further modified by substituting a rail or cross-bar for the gates, the function of the rail being the same as that of the gate—viz., to brace the side rails when in use and prevent persons washing overboard. When folded, the railings H and gates L lie in parallel position with the floats A. Seats or thwarts M are placed across the raft, resting, when in use, on the meshes of the gratings H, and when stowed are placed parallel with the floats A and the gratings H.

A flag-staff, N, is placed in rings O and P in one of the gates L. The flag-staff N, together with oars and a boat-hook, is placed parallel with the thwarts when the raft is stored.

The provision-receptacles being air-tight, provisions can be safely stored therein without deteriorating from drying up or by encroachment by vermin, and are accessible from either side.

Having described my invention and the mode of making and operating the same, what I claim therein as new and of my own original and first invention is—

1. The hollow rectangular metallic floats united by hinges, so as to present parallel flat surfaces of the floats to each other when either folded or extended, and with beveled ends adapted to ride with either surface upward.

2. In a reversible life-raft composed of hinged sections susceptible of folding and extension into a flat plane, the combination of a guard-railing attached thereto by hinges susceptible of turning with said railing through a sufficient arc of a circle to present the railing above either flat surface of the raft, substantially as and for the purpose described and shown.

MARIA E. BEASLEY.

Witnesses:

J. DANIEL EBY,
ALEX. H. SIEGEL.





(No Model.)

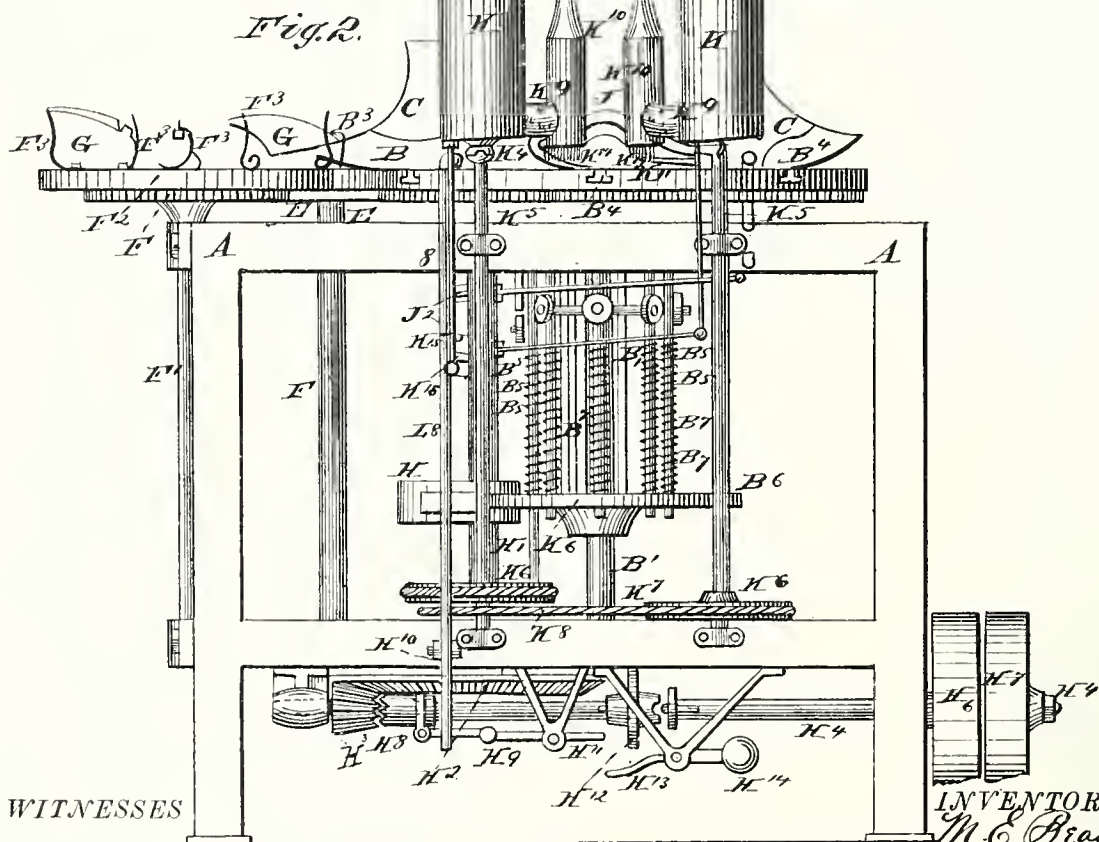
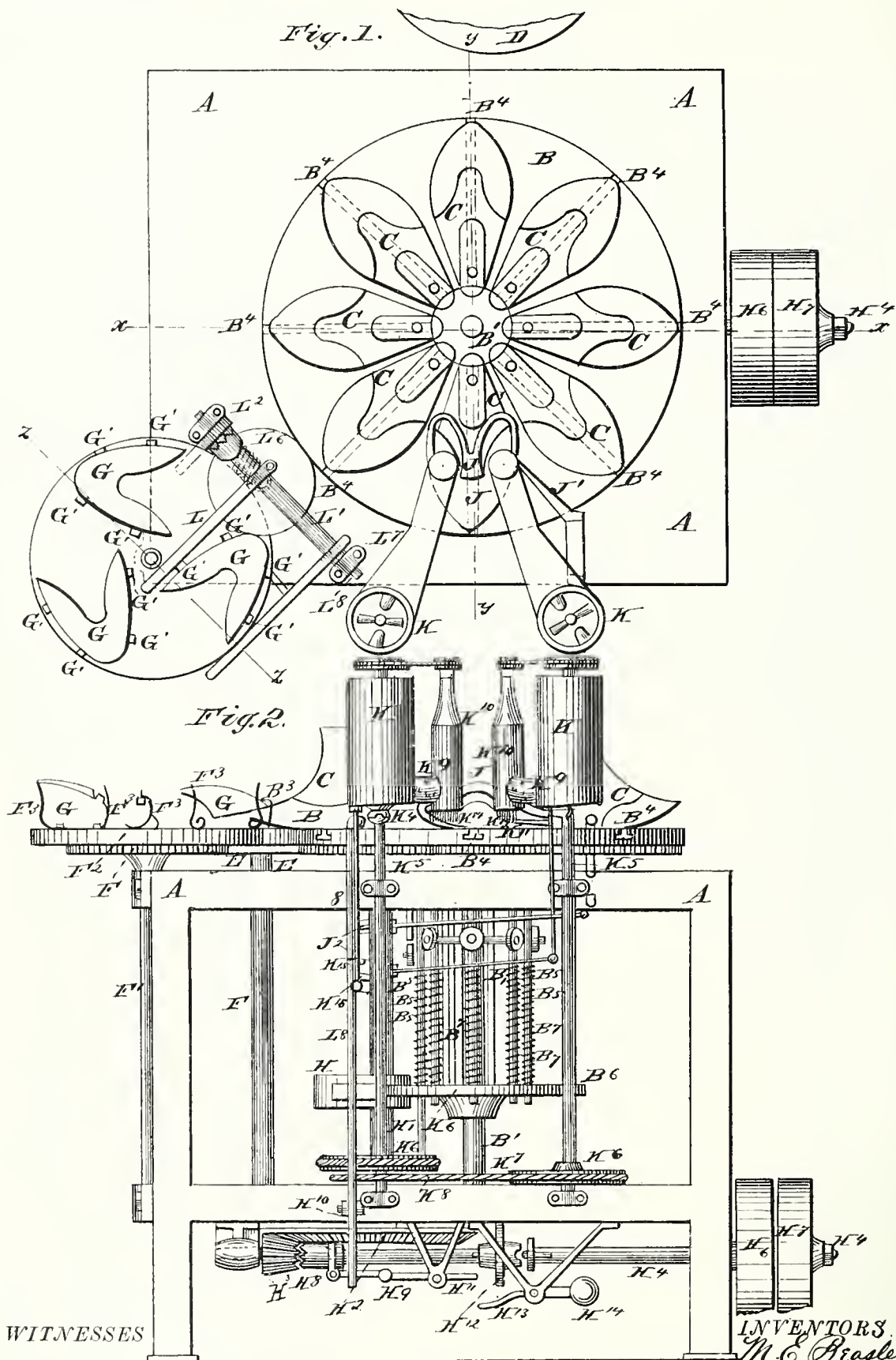
4 Sheets—Sheet 1.

M. E. BEASLEY & S. L. WIEGAND.

MACHINE FOR PASTING SHOE UPPERS.

No. 258,004.

Patented May 16, 1882.



WITNESSES

Ad. G. Dietrich
F. G. Dietrich

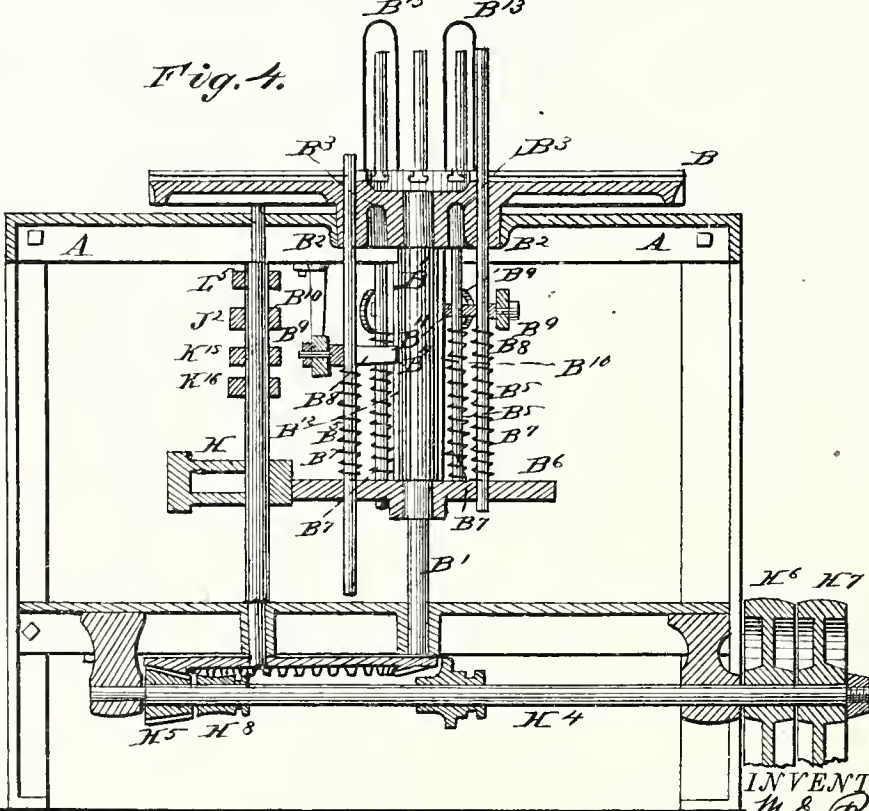
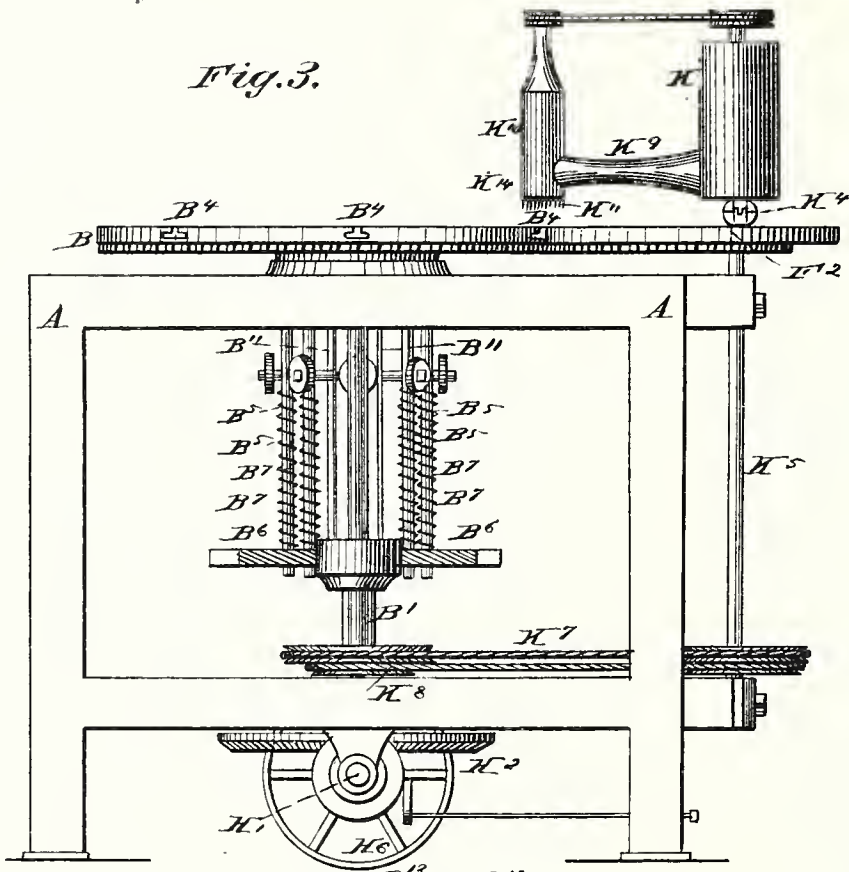
F. C. Dörnerich

INVENTORS.
M. E. Brasley.
J. L. Hegand.

M. E. Brasley.
S. L. Wiegand.

S. L. Megand.

by Lloyd Wiegand Attorney.



WITNESSES

Fred. L. Dieterich
 P. C. Dieterich

INVENTORS
 M. E. Beasley
 S. L. Wiegand

by
 Lloyd Wiegand Attorney

(No Model.)

4 Sheets—Sheet 3.

M. E. BEASLEY & S. L. WIEGAND.

MACHINE FOR PASTING SHOE UPPERS.

No. 258,004.

Patented May 16, 1882.

Fig. 5.

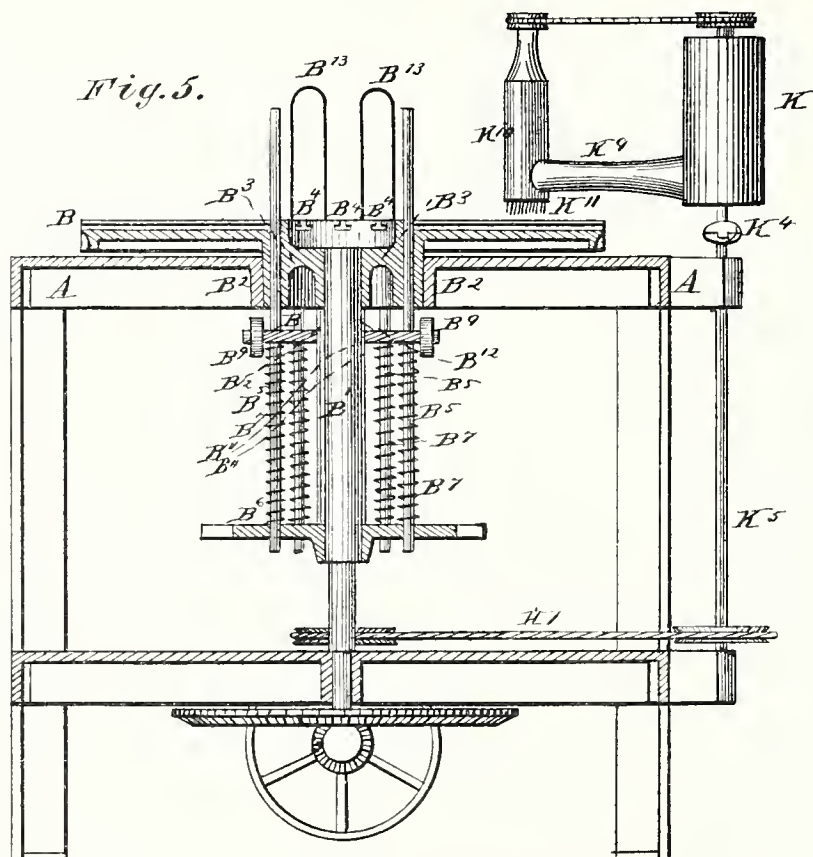


Fig. 6.

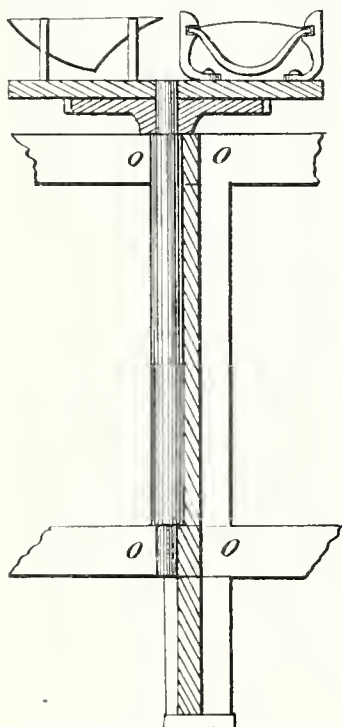


Fig. 7.

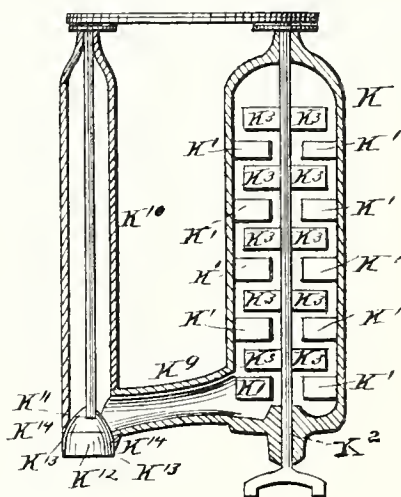


Fig. 17.

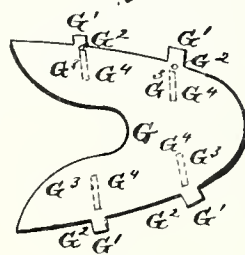
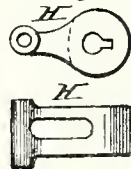


Fig. 18.



WITNESSES

Med. L. Dietrich
P. C. Dietrich.

INVENTORS

M. E. Beasley
S. L. Wiegand
by Lloyd Wiegand, Attorney

M. E. BEASLEY & S. L. WIEGAND.

MACHINE FOR PASTING SHOE UPPERS.

No. 258,004.

Patented May 16, 1882.

Fig. 8.

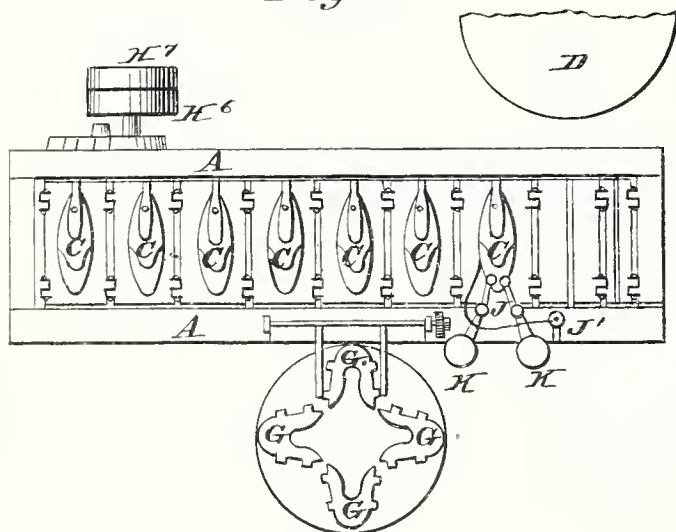


Fig. 9.

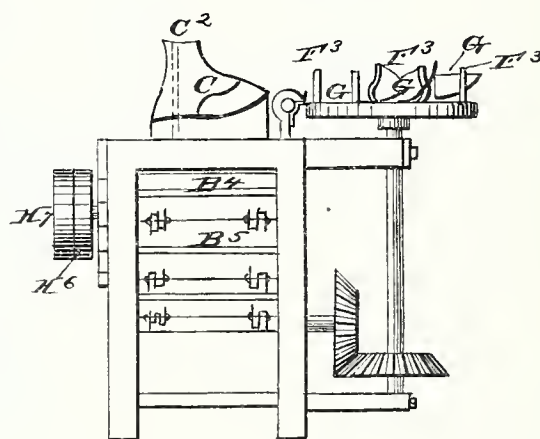


Fig. 10.

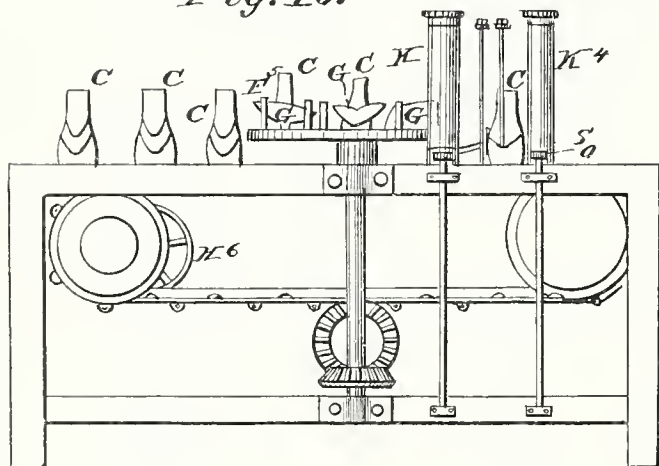


Fig. 11.

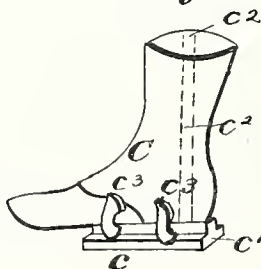


Fig. 12.

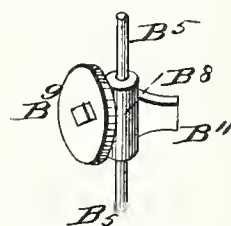


Fig. 14.

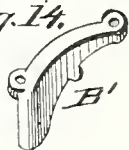


Fig. 13.

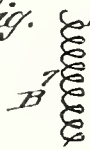


Fig. 15.

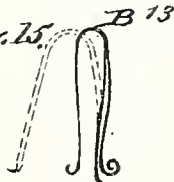
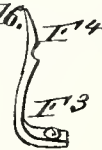


Fig. 16.



WITNESSES

Wid. L. Dieterich
P. C. Dieterich.

INVENTORS

M. E. Beasley
S. L. Wiegand
by Lloyd Wiegand Attorney.

UNITED STATES PATENT OFFICE.

MARIA E. BEASLEY AND S. LLOYD WIEGAND, OF PHILADELPHIA, PENNSYLVANIA; SAID WIEGAND ASSIGNOR TO SAID BEASLEY.

MACHINE FOR PASTING SHOE-UPPERS.

SPECIFICATION forming part of Letters Patent No. 258,004, dated May 16, 1882.

Application filed September 30, 1881. (No model.)

To all whom it may concern:

Be it known that we, MARIA E. BEASLEY and S. LLOYD WIEGAND, of Philadelphia, Pennsylvania, have jointly invented a new and useful Machine for Pasting Together the Parts of Shoe-Upper Preparatory to Sewing and Lasting Them; and we do hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable others skilled in the art to make and use the said invention, reference being had to the accompanying drawings and the letters of reference marked thereon.

The nature of this invention consists in a series of forms, blocks, or molds upon which the parts are placed as they serially pass before clamping, pasting, and smoothing devices, and gripper and frames which, by devices similar to the register points and gages used in printing, place the several parts in exact position, and thus insure the exact and rapid assembling of the several parts forming the shoe-upper, as hereinafter fully shown.

Figure 1 of the drawings shows a plan of the machine; Fig. 2, a front elevation; Fig. 3, a side elevation; Fig. 4, a vertical section in the plane indicated by the line $x x$ in Fig. 1; Fig. 5, a section in the plane indicated by the dotted line $y y$ in Fig. 1; Fig. 6, a section in the plane indicated by the dotted line $z z$ in Fig. 1; Fig. 7, an elevation partially in section of the pasting fountain and brush, and scrapers connected therewith, the paste-fountain drawn on enlarged scale. Figs. 8, 9, and 10 show projections in plan, front, and side elevation, in which the several mechanisms are differently assembled, and the remaining figures show the several parts in detail on enlarged scale.

The same letters of reference apply to the same parts in the several figures.

A represents the frame of the machine; B, a large horizontal circular table rotating with a shaft, B' , and supported by a large bearing, B^2 , fitting around an enlargement or boss, B^3 , formed on the under side of the table B. In the upper face of the table B are formed equidistant radial slots B^4 , in shape like an inverted capital block-letter T. These slots

sions, so as to fit correspondingly-shaped slides (marked C') attached to the under side of the molds or forms C. The forms C are the shape of the interior of a shoe or gaiter upper before the same is lasted and as spread open far enough to place all of the parts involved in the seam uniting the vamp to the quarters or sides in convex form, and are made perforated or of porous material at the parts near the seam in order to expedite the drying of the paste. The inverted-T shaped slides C' are made to fit accurately in the slots B^4 in the table B, so as to slide freely therein, but not to shake or vibrate laterally. In each of the forms C is a hole, C^2 , made perpendicularly in the center near the heel end of the form, and should be made accurately of the same diameter and at the same distance from the heel in all of the forms used upon the same machine for the same size and pattern of shoe-upper.

Through the table B, at equal distances from the center and centrally in each of the slots B^4 , are fitted a series of vertically-sliding bolts, B^5 . These bolts B^5 are guided at their lower ends by passing through holes in a plate or wheel, B^6 , securely fastened upon the shaft B' , and are raised by means of spiral springs B^7 , which rest at their lower ends on the plate B^6 , with their upper ends pressed against trammels or clamps B^8 , secured upon the bolts B^5 . The trammels B^8 each bear a roller, B^9 , adapted to pass under an inclined plane or stationary cam, B^{10} , by which at the proper time they are depressed. The bolts B^5 are prevented from turning and so caused to present the rollers B^9 properly to the action of the cam B^{10} by projections B^{11} , formed on the trammels B^8 , sliding in grooves B^{12} , formed in the shaft B' , parallel with the axis thereof. When held up by the springs B^7 the bolts B^5 engage in the holes C^2 in the form C and hold them in position in the table B. When depressed by the cam B^{10} they are disengaged from the forms C and permit the forms C to be disengaged from the table B by the slides C' sliding outward in the radial grooves or slots B^4 . A series of springs, B^{13} , shaped like an inverted capital letter U, are secured by one end near the center of the table B, and have their free ends resting against

the parts of the form C directly below the heel of the uppers, and are so set and adjusted as to project the forms C from the table B when the bolts B⁵ are retracted or depressed by the operation of the cam B¹⁰. The adjustment of the cam B¹⁰, rollers B⁹, bolts B⁵, and springs B⁷ in relation to the plates B⁶ and table B is such that as the table B is turned each bolt is successively retracted so as to clear the form C upon which the operation of pasting and clamping has been completed, and the spring B¹³ discharges that form from the table B upon a carrying or conveying table, D, which turns slowly upon an upright axis and receives the several forms with their uppers upon them, and holds them while the drying and absorption of moisture proceed sufficiently to permit of the separation of the form C and the clamps G, hereinafter described, from the uppers. An endless apron or belt may be substituted for the wheel D.

Upon the periphery of the table B are formed cog-teeth, in number equal to a multiple of the number of the slots B⁴, into which gears an idle or transmitting wheel propelling another wheel, F, of such number of teeth as to be evenly divided by the same multiple as the number of teeth in the wheel B. Upon the upper end of the same vertical shaft, F¹, as the wheel F, and turning therewith, is a table, F². Upon this table is secured a series of springs, F³, which are arranged in sets of three or more, (four are preferable,) and serve to receive and hold the forms G in position. The forms G are made of metal and of the shape of the vamp or front portion of the shoe-upper, and are provided with ears or projections G¹, which, resting upon the shoulders F⁴ of the springs F³, hold the forms G in position, and also, engaging in springs C³ on the form C, serve to hold and clamp the forms G and C together, and hold the vamp and quarters when placed in and on them, in the manner hereinafter described, during the operation of drying.

Upon the forms G are placed registering gages or pins G², which serve to guide the leather vamps G³ and determine their position with precision in the form G. The gages or pins G² are attached by springs G⁴, (shown in dotted lines in Fig. 17,) which, yielding, permit the pins G² to recede when the vamps are applied to the quarters of the upper, as will hereinafter appear.

The rotary motion of the tables B and F² is intermittent and derived from a cam, H, engaging in notches of peculiar form in the rim of the plate B⁶, and is transmitted from the teeth on the rim of the table B through the wheel E to the wheel F. The operation of the cam H (shown in Fig. 18) in the wheel or plate B⁶ is like that of the device known to clock and watch makers as the "Geneva stop-motion." The cam H is mounted upon and turns with a shaft, H¹, turned by a beveled cog-wheel driven by a beveled pinion, H³, on a shaft, H⁴, provided with the usual fast and loose pulleys, H⁶ and H⁷, adapted to receive power from an

endless band or belt. The connection between the pinion H³ and the shaft H⁴ is effected by a clutch, H⁸, so beveled as to tend to unclutch, and is held in connection by a pair of toggle-levers, H⁹, which is held in a straight position for engaging by a spring-latch, H¹⁰, and can be re-engaged after having been liberated by pressure upon the pedal H¹¹.

Upon the shaft H⁴ is mounted, so as to slide upon and turn with the shaft, a wheel, H¹², having a rim of leather, which may be pressed against the side of the beveled wheel H² opposite to the pinion H³ on a smooth rim above the teeth by means of a treadle, H¹³, and is automatically retracted by the weighted arm H¹⁴. This wheel enables the operator at pleasure to turn the machine backward when the pinion H³ is disengaged. A stencil, J, mounted adjustably upon an arm, J¹, so as to rise and fall by the action of a cam, J², on the shaft H¹, covers the part of the upper upon a form, C, exposing only such portions as are to receive paste. The adjustment of the cam J² is such as to raise and hold the stencil J clear of the form during the rotary motion of the table B.

Contiguous to the front of the form covered by the stencil J are placed two paste-fountains, K, with scrapers and brushes combined, which parts are shown on an enlarged scale in Fig. 7. The fountains are upright vessels K, having inclined wings or vanes fastened on their inside, and a rotating vertical shaft, K², provided with vanes K³, inclined in an opposite direction from the vanes K¹. The direction of the motion of the shaft K² and vanes K³ is such that the paste by their combined action is kept thoroughly stirred and pressed downward. The rotary motion of the shaft K² is imparted by an easily-detachable clutch or coupler, K⁴, from the upright shafts K⁵, propelled by pulleys K⁶ and endless cords K⁷, receiving motion from the pulley K⁸ on the shaft H¹. A spout or arm, K⁹, extends from each to the paste-fountain, and is made flexible, so as to rise and fall to a limited extent, and at the end terminates in an upright chamber or cylinder, K¹⁰, from the bottom of which protrudes a brush, K¹¹, having a center formed of bristles K¹², between which paste is forced, and around which bristles are placed steel scrapers K¹³, inclosed in a sheath of india-rubber, K¹⁴. The scrapers roughen the exposed part of the leather and insure the penetration of the paste, and the india-rubber covering or sheath prevents the paste splashing and wasting between the scrapers. The brushes are rotated from the shafts K⁵ by means of cords and pulleys.

The fountains K and arms K⁹ with their connected brushes and scrapers turn about the axis of the shaft K⁵, so as to apply paste to the exposed portions of the lining and quarters that protrude through the stencil J, such motion being derived from the cams K¹⁵ and K¹⁶ on the shaft H¹. The paste-fountains K are attached by thumb-screws to the frame, and are readily removed and attached, so as to be easily cleaned.

The molds or forms G, bearing vamps, are transferred from the table F² by a pair of elastic arms, L, turning with a rock-shaft, L', while the tables are stationary. The motion of the rock-shaft L' is derived from the pinion L², driven by a sector, L³, moved by a cam, L⁵, on the shaft H'. The pinion L² is not rigidly secured to the rock-shaft L'; but it is connected by a clutch, L⁶, having teeth beveled in both directions. This clutch has one member fastened to the rock-shaft L', and the other member fastened to or formed on the side of the pinion L², against which it is pressed by a spring, L⁷, of sufficient tension to overcome all normal resistances in transferring the form G and "vamp" to the form C and the "quarters." When, through accidents, any undue resistance is encountered, the pinion L², bearing against the bearing L⁴, turns without turning the rock-shaft L', but, instead, causes it to move endwise, and by means of a lever, L⁸, liberates the spring H¹⁰ and releases the toggles H⁹, unclutches the driving-pinion, and stops the machine. When the vamp is applied to the quarters the guides or pins G², being supported by the springs G⁴, yield and recede so as to permit close contact of vamps and quarters, and the form G clamps them firmly together by engaging the projections G' in the springs C³ on the forms C.

In the modified form of the machine, as shown in Figs. 8, 9, and 10, instead of the circular table B an endless band, Q, formed of plates hinged together in the manner of the traveling platform of a "railway horse-car," is used to convey the forms C, and the intermittent cam-motion for progressively moving it is applied to the reels or cylinders upon which it returns.

The operation of the machine is as follows: The quarters and inner lining, having been previously sewed and turned, are placed in the forms C and successively placed in the machine with the slides C' of the forms in the slots B⁴ of the table B. The bolts B⁵, engaging in the holes C² in the form C, successively pass by the intermittent motion of the table B to the stencils J and pasting devices, where they receive a coat of paste on the parts exposed, and at the next step receive from the arms L a form, G, containing a vamp, which form G claps by its projections G' upon the springs C³ of the form C, in which it is securely held. Upon farther rotation of the table B the bolts B⁵ are retracted, and the forms containing the parts pasted in exactly registered position are discharged by the springs B¹³ upon the table D. A counter or register may be added to record the work done by the machine, and also a second counter to record the number of times that the clutch H⁹ is liberated, so as to determine the amount of work produced by the machine.

Having described our invention and the mode of operating the same, we claim as new and useful therein and as original of our invention—

1. A machine for pasting the parts of shoe-

uppers together, embracing the following devices in combination: a series of forms for receiving and holding the upper, a paste fountain and brush, a clamping device, and a discharging mechanism, all substantially as described, arranged to operate substantially in the manner set forth.

2. In a machine for pasting the parts of shoe-uppers together, the combination of gages and forms, substantially as described, for guiding the feeding of parts and determining the registration thereof, substantially as and for the purpose set forth.

3. In a machine for pasting shoes, the combination, substantially as described, of pasting-brushes with guards or stencils for restricting the spreading of paste or other cement, substantially as and for the purpose set forth.

4. In a machine for pasting together the parts of shoe-uppers, the perforated forms, in combination with clamps for holding the parts in position while drying.

5. In a machine for pasting together the parts of shoe-uppers, the combination of the scraping device with a pasting device, substantially as and for the purpose set forth.

6. In a machine for uniting the parts of shoe-uppers by pasting, the combination of a wheel for receiving and conveying the forms bearing uppers with the pasting and clamping devices, substantially as and for the purpose set forth.

7. In a machine for pasting the parts of shoe-uppers together, the combination of a throw-off or disengaging device driven with the driving-shaft and the feeding and clamping mechanisms, substantially as and for the purpose set forth.

8. In a machine for pasting shoe-uppers together, the combination of a tempering or stirring device, substantially as shown, with the paste-fountains, substantially as and for the purpose set forth.

9. In a machine for pasting the parts of shoe-uppers together, the combination of forms and clamps with the guiding and discharging mechanism, substantially as shown and described.

10. In a machine for pasting the parts of shoe-uppers together, the combination of guides and clamps, substantially as shown and described, for holding the vamps during the pasting operation.

11. In a machine for pasting the parts of shoe-uppers together, the combination of an intermittently-moving table, adapted to receive the forms bearing the quarter-pieces, with a reciprocating flier adapted to convey and apply molds or clamps containing the vamps, all substantially as and for the purpose set forth.

12. In a machine for pasting together the parts of shoe-uppers, the combination of the intermittently-rotating mold or table adapted to receive vamps in clamps or molds and deliver them to a flier, substantially as and for the purpose set forth.

13. In a machine for pasting the parts of shoe-uppers together, the combination of the flier for applying the vamps with the stop-motion

to automatically stop the machine when the vamp fails to apply properly to the quarters, as and for the purpose set forth.

14. In a machine for pasting the parts of shoe-uppers together, the combination of the discharging mechanism with a registering mechanism, so as to register the uppers delivered, as and for the purpose set forth.

15. In a mechanism for pasting the parts of shoe-uppers together, the combination of two or more intermittently-moving tables, substantially as set forth, adapted to convey forms bearing the parts of the uppers to a pasting and a clamping mechanism, as and for the purpose set forth.

16. The form C, provided with springs C³, substantially as shown and described, and for the purpose set forth.

17. The clamps G, provided with register-pins G² and springs G⁴, substantially as and for the purpose set forth and shown.

18. The combination of forms and clamps, substantially as described, constructed and arranged to co-operate as and for the purpose set forth.

19. The adjustable stencils or guides constructed and arranged as and for the purpose set forth.

20. The disengaging and backing devices combined to co-operate as and for the purpose set forth.

21. The combination of the sliding bolts B³ with the intermittently-moving table B and forms or clamps C, substantially as and for the purpose set forth.

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M. E. BEASLEY.

MACHINE FOR DRIVING HOOPS UPON CASKS.

No. 256,951.

Patented Apr. 25, 1882.

Fig. 1.

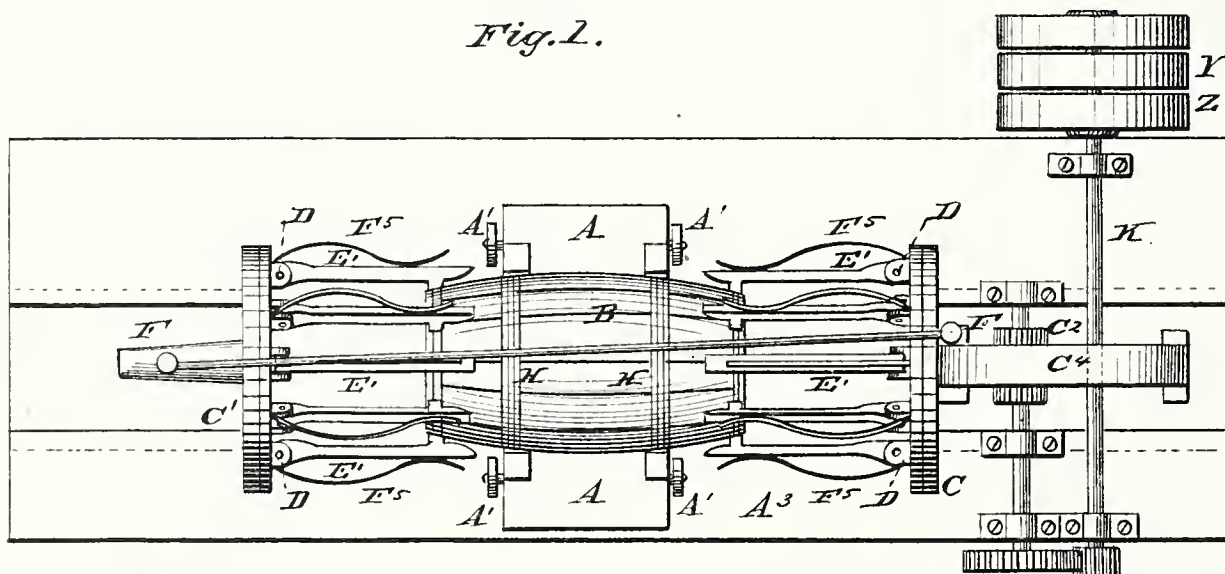


Fig. 2.

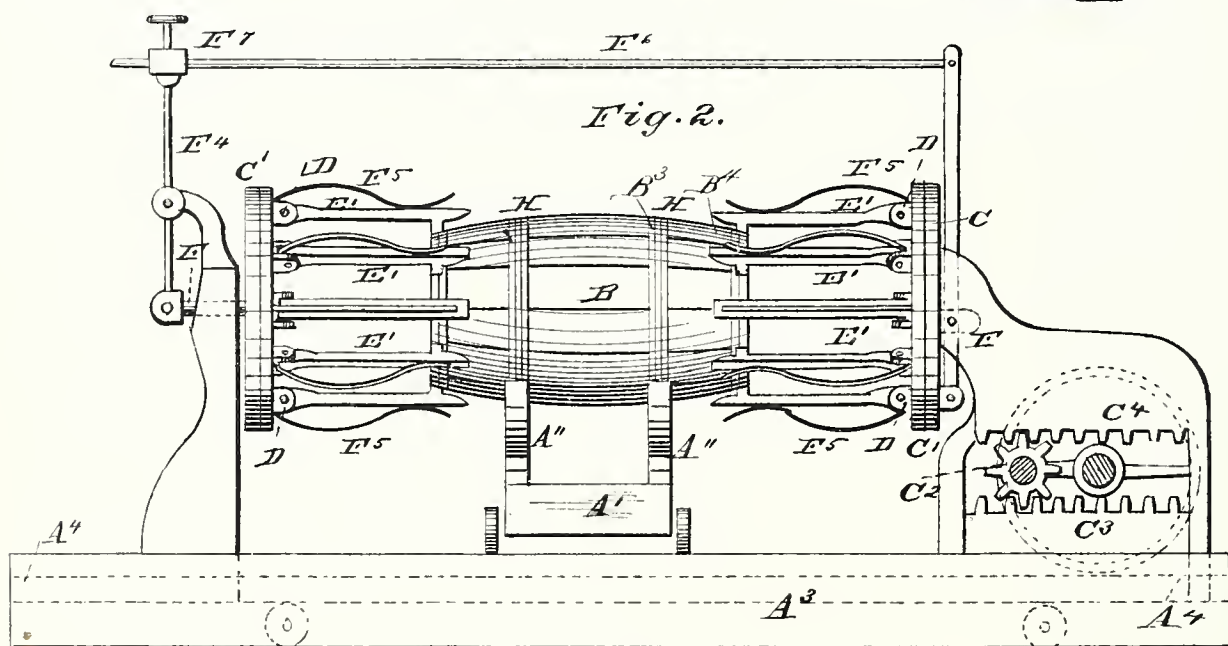
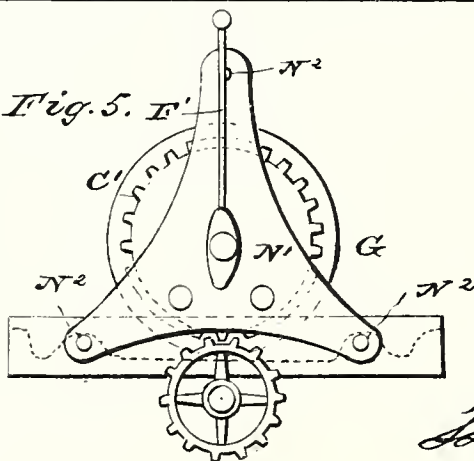


Fig. 5.



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(No Model.)

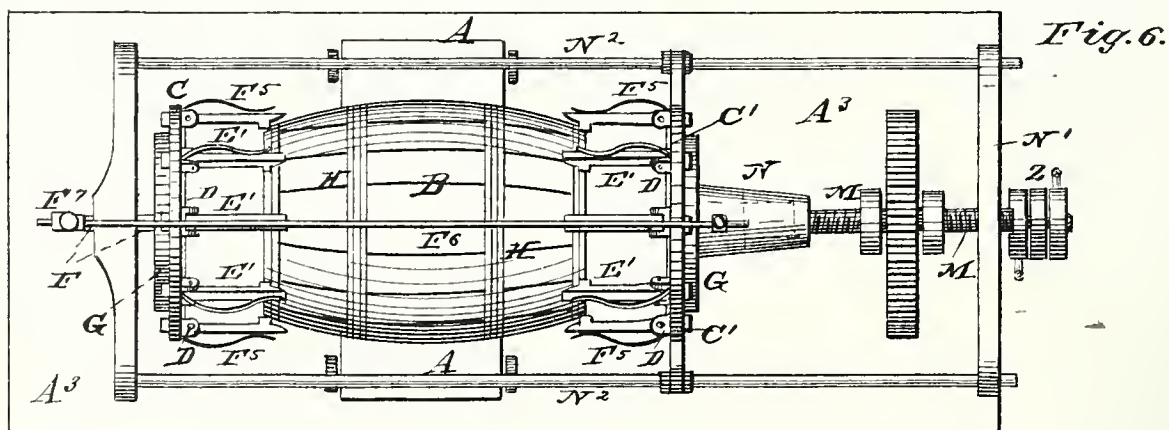
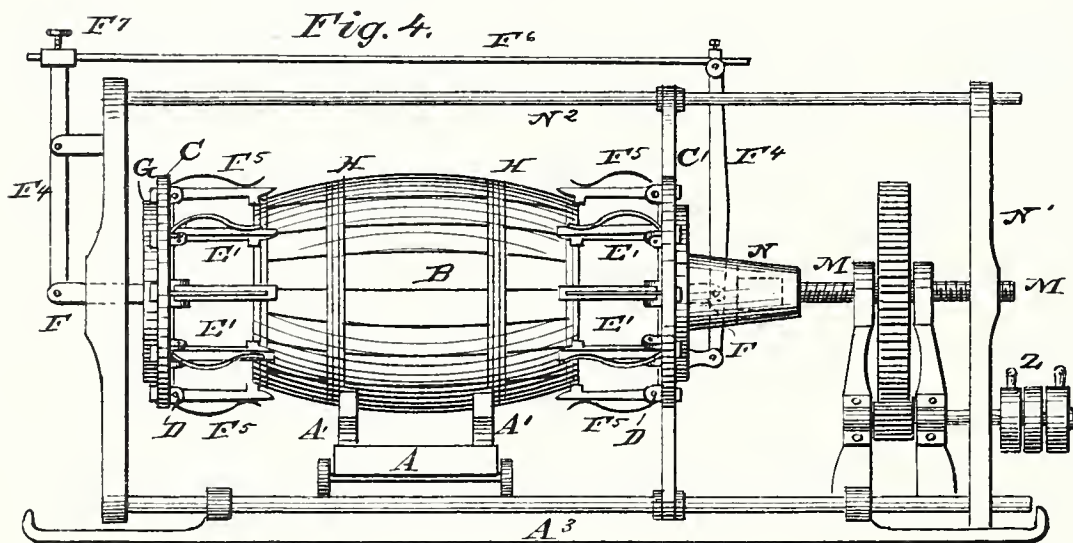
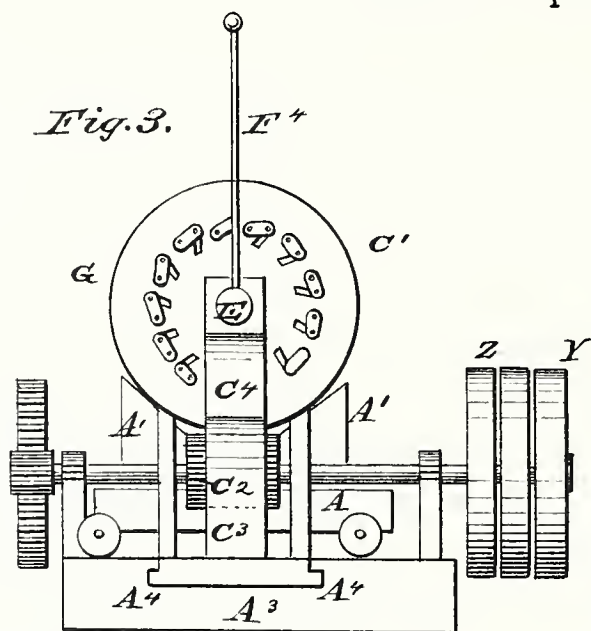
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WITNESSES
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#

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(No Model.)

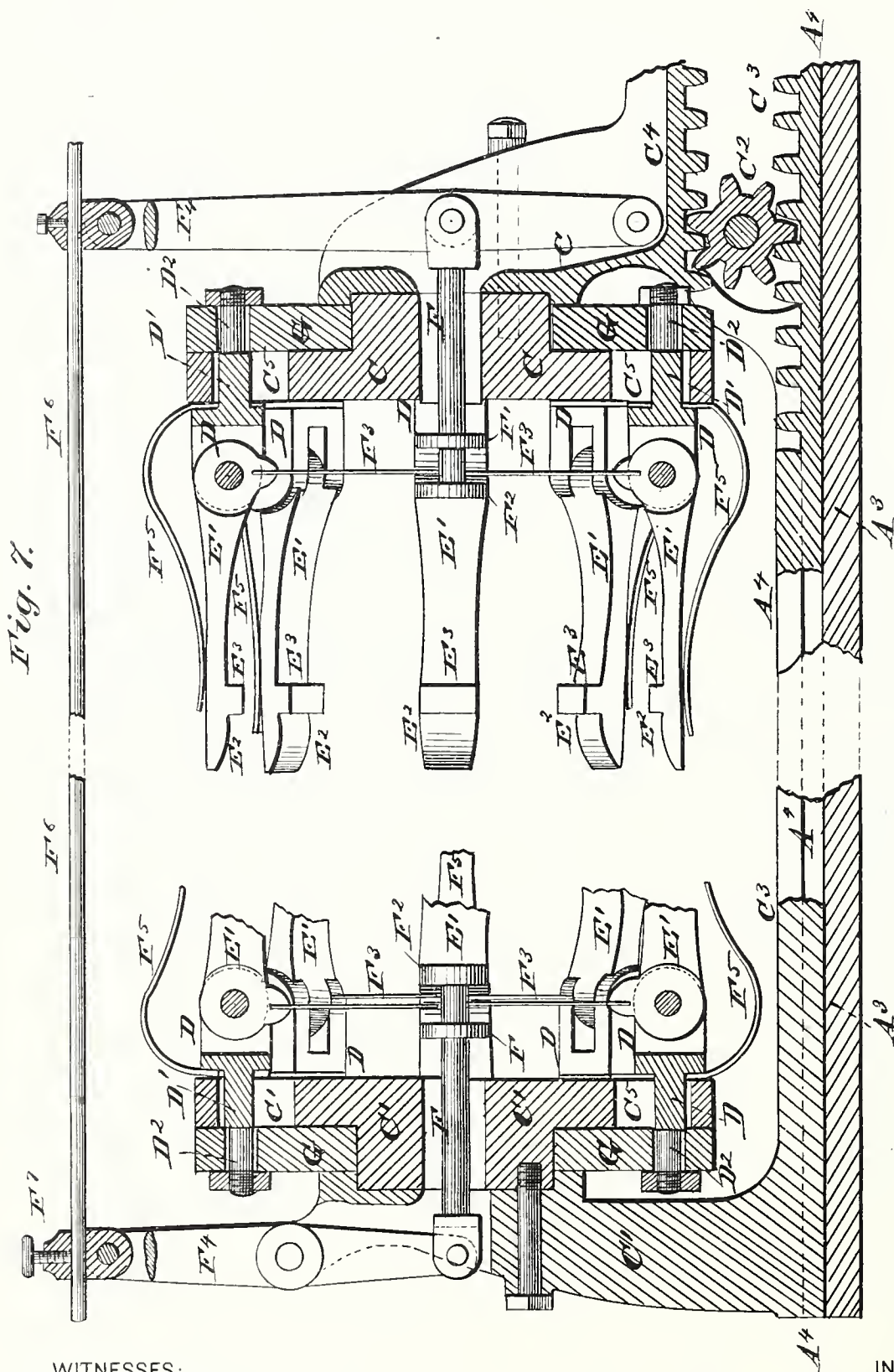
4 Sheets—Sheet 3.

M. E. BEASLEY.

MACHINE FOR DRIVING HOOPS UPON CASKS.

No. 256,951.

Patented Apr. 25, 1882.



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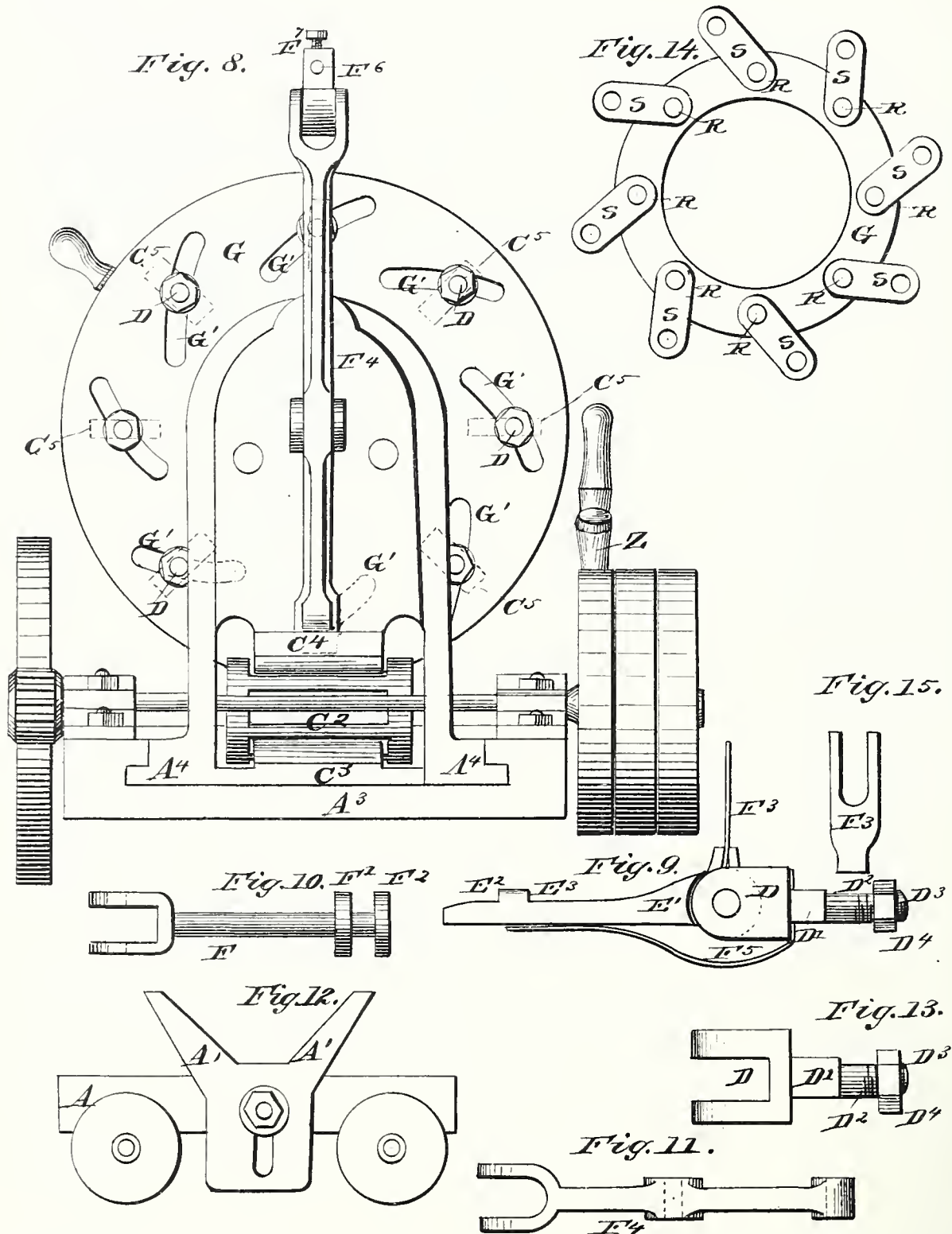
Maria E. Brasley
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MACHINE FOR DRIVING HOOPS UPON CASKS.

No. 256,951.

Patented Apr. 25, 1882.



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UNITED STATES PATENT OFFICE.

MARIA E. BEASLEY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO WILLIAM ROBERT THOMPSON, OF SAME PLACE.

MACHINE FOR DRIVING HOOPS UPON CASKS.

SPECIFICATION forming part of Letters Patent No. 256,951, dated April 25, 1882.

Application filed November 30, 1881. (No model.)

To all whom it may concern:

Be it known that I, MARIA E. BEASLEY, of the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Driving Hoops upon Casks; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable those skilled in the art to make and use the said invention.

The object of this invention is to avoid some inconveniences and delays incident to the working of the machine set forth in my Letters Patent No. 245,050 by making this machine so as to readily adapt itself to any imperfections of form in the cask and hoops, and thus greatly accelerate its work.

In the working of the above-stated patented machine the unequal action of the driving-belts sometimes would move one driving-head faster than the other and displace the cask on the truck or saddle, and the variations in the angle at which the jaws rested upon hoops of unequal diameter hindered the driving of the hoops, and it rendered the machine uncertain in its action.

The nature of my invention consists in combination of appliances for more conveniently holding the casks to be hooped, so as to properly present them to the action of the hoop-driving machinery; in an adjustable arrangement of the hoop-driving arms and jaws, whereby the machine can be readily adapted to casks of different diameters; in a mechanism for automatically adapting the driving arms and jaws to imperfections or deviations in the casks from circular form; in an improved mechanism for holding the hoops in position so as to present them to the action of the driving apparatus; and in improved combinations of mechanism for driving hoops equally on both ends of the casks simultaneously.

I will now proceed to describe the mode of making and operating this invention, referring in so doing to the drawings annexed and the letters of reference marked thereon.

Figure 1 represents a plan of the machine. Fig. 2 represents a front elevation; Fig. 3, an end elevation. Figs. 4, 5, and 6 show modifications. Fig. 7 shows an enlarged central sec-

tion of the heads C and C'; and Fig. 8, an end view of the head C, showing the mechanism for expanding and contracting the driving apparatus to suit casks of different diameters; and the remaining figures illustrate parts of the machine in detail upon an enlarged scale.

A represents a truck, having V-shaped saddles (marked A') adjustable thereon in height so to support the cask B that its axis may coincide with the axis of the driving mechanism, hereinafter described. The height of the saddles A' being adjustable, they can be adapted to hold casks of different diameters in the proper central position to receive the hoops.

C and C' are two heads or standards fitted to slide lengthwise in guides A¹, formed in a base, A³, and are moved simultaneously in opposite directions by a pinion, C², engaging in the racks C³ and C⁴, attached respectively to the heads C and C'. The pinion C² is propelled by a train of gear-wheels and pinions susceptible of being reversed in the direction of their motion by either shifting belts or clutches engaging in pulleys revolving in opposite directions, controlled by the hands of an attendant.

Upon each of the standards C and C' are placed a series of jaws or joints, D, arranged at equal distances in circles concentric to the axis of the cask B. In each of the jaws D is a claw or arm, E', provided with a tooth or shoulder, E², adapted to rest against the hoop H and press it toward the center of the cask B. The several jaws D are made radially adjustable by fitting through radial slots C⁵ in the heads C and C', the portions D' of the stems or shanks of the jaws D fitting in the slots C⁵ being rectangular, so as to prevent their turning, while they may slide lengthwise in the slot C⁵. The portion D² of the shank of the jaws D back of the head C and C' is cylindric, and passes through spiral or involute slots G' in the circular plates G, which are fitted so as to turn upon centers coincident with the axial line of the barrel. A nut, D³, fitting upon screw-threads D⁴ on the shanks of the jaws D, serves the double purpose of holding the jaws D against the heads C and C' and also the plates G against the back of the heads or standards

C and C'. By turning the plates G either forward or backward the jaws D are simultaneously caused to approach or recede from the center or the axial line of the barrel, and are thus radially adapted to casks of different diameters.

Instead of the plates G having involute slots G', a plate, G, as shown in Fig. 14, may be used, provided with equidistant studs R and links S, fitting upon the parts D² of the jaws D. The operation of this form of device is the same as that first described in expanding or contracting the circle of the jaws D on the heads C and C' to suit different diameters of casks.

Upon each of the arms E', back of the tooth or shoulder E², is a second shoulder, E³, adapted to engage with the truss-hoops and draw them off from the casks. The bevel and portions of arms E' beyond the tooth or shoulder E² is of such form as to be adapted to rest on the outer surface of the hoops H.

To each of the arms E', near to the points jointed to the jaw D, is attached a spring, F³, (shown detached in Fig. 15 and as applied in Fig. 10,) projecting at right angles of the arm E toward the center of the head C, and having a slit formed in the end to fit over the rods or bolts F F between the collars F' and F², fastened thereon.

The rods F are susceptible of motion lengthwise, and when moved toward the cask they cause the arms E to open, and when moved away from the cask cause the arms E to close upon the hoops H. The springs F³ act as levers in conjunction with the arm E', and their elasticity permits the levers E to adapt themselves to any variations from the circular form in casks and hoops. The slotted ends of the springs F³ permit them to slide in and out on the bolt or rod F without becoming disengaged from the rod F and collars F' and F² when the radial adjustment of the jaws D and the connected parts is changed.

The levers E' are pressed in toward the center of the cask B by means of springs F⁵, and are opened by means of levers F⁴ operating the rods F. The levers F⁴ are connected by a rod, F⁶, which is adjustably connected to one of the levers F⁴, as shown at F⁷ in Fig. 2, so as to operate both levers simultaneously in different adjustments for different lengths of casks. By means of a shifter applying the bands turning the pinion C² by its connected gearing in either direction the heads C and C' can be forced toward each other or drawn apart, and by means of the rod F⁶ the arms E may be simultaneously opened and closed.

In the modified form of the machine shown in Figs. 4, 5, and 6 a right and left screw, M, and nuts N and N' are substituted for the pinion C² and racks C³ and C⁴ for propelling the heads C and C'. The motion from the nut N' is transmitted to the head C by means of rods N². This form of machine possesses the advantage of a more direct transmission of force than that shown in the preceding figures; and

the rods N², acting as guides, supersede the bed-plate A³ required in the other form of machine.

The machine is operated as follows: The cask B, with the truss-hoops B³ upon it, is placed on the truck A centrally with the heads C and C'. A hoop of metal is then placed upon each end of the cask at the points marked B⁴, and the arms E' being closed upon it, so that the shoulders E² bear against the outer edges of the hoops, and the power applied by means of the shifter, so that both end hoops are forced tightly on the casks. The motion of the driving-gear is then reversed, so as to loosen the hold of the arms E' on the end hoops, and the arms opened by moving the rod F⁶, and the heads C and C' are then moved toward each other sufficiently to permit the hooks or shoulders E³ to pass over the truss-hoops B³. The arms E are then closed by moving the rod F⁶, and upon applying power by the shifter the heads C and C' are drawn apart, pulling the truss-hoops B³ off, after which the intermediate permanent hoops are applied and forced on in the same manner as the end hoops.

Having described my invention and the mode of using the same, what I claim is—

1. In a machine for driving hoops upon casks, the combination of radially-adjustable jaws D and arms E, hinged thereto, having claws E², with the pair of heads C and C', and arranged to reciprocate through varying distances in opposite directions by means of gearing propelled by a reversible driving mechanism, substantially as and for the purpose set forth.

2. In a machine for hooping casks, the truck A, having V-shaped bearings A', adjustable thereon in height, and adapted to hold casks of different diameters centrally between the driving-heads C and C', in combination with said driving-heads, provided with arms E' and jaws D, radially adjustable thereon and arranged to reciprocate simultaneously in opposite directions, as and for the purpose set forth.

3. The combination of the rigid arms E', springs F⁵, spring arms or levers F³, operated by the rods F, having collars F' and F² thereon, and moved by the levers F⁴, connected adjustably at F⁷ by the rod F⁶, for the purpose of adapting the machine to casks of different lengths, substantially as described and shown.

4. In a machine for driving hoops on casks, the combination of the rigid arms E', provided with shoulders E² and E³, adapted to drive on or retract hoops from casks, with the elastic actuating-arm F³, connected by the collars F' and F² on the rods F, for applying and releasing the shoulders E² and E³ to and from hoops upon casks of imperfect circular form, as and for the purpose set forth.

5. In a machine for driving hoops on casks, the double series of arms E', having shoulders E² and E³, adapted to drive on or draw off the hoops of casks, in combination with the rods F' and the spring-levers F³, and a driving

mechanism adapted to move the pair of heads bearing both series of arms simultaneously in opposite directions, substantially as and for the purpose set forth.

5 6. In a machine for hooping casks, the combination of reciprocating heads C and C', operated by mechanism moving them variable distances simultaneously in opposite directions, and bearing rigid arms E, pressed inwardly by
10 the springs F⁵, with the elastic arms F³, for the purpose of opening the arms E' and applying the shoulders of the several arms E to irregularities in the shape of the hoops, and driving the hoops on or drawing the hoops off from a
15 cask, substantially as set forth and described.

7. The combination of the double series of arms E', connected elastically by the spring-arms F³ and rods F to a single opening and closing mechanism, and hinged to the jaws D, with the pair of heads C and C', rigidly secured
20 to said jaws D and arranged to move simultaneously in opposite directions, substantially as and for the purpose set forth.

In witness whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

MARIA E. BEASLEY.

Witnesses:

VAN WYCK BUDD,
J. DANIEL EBY.



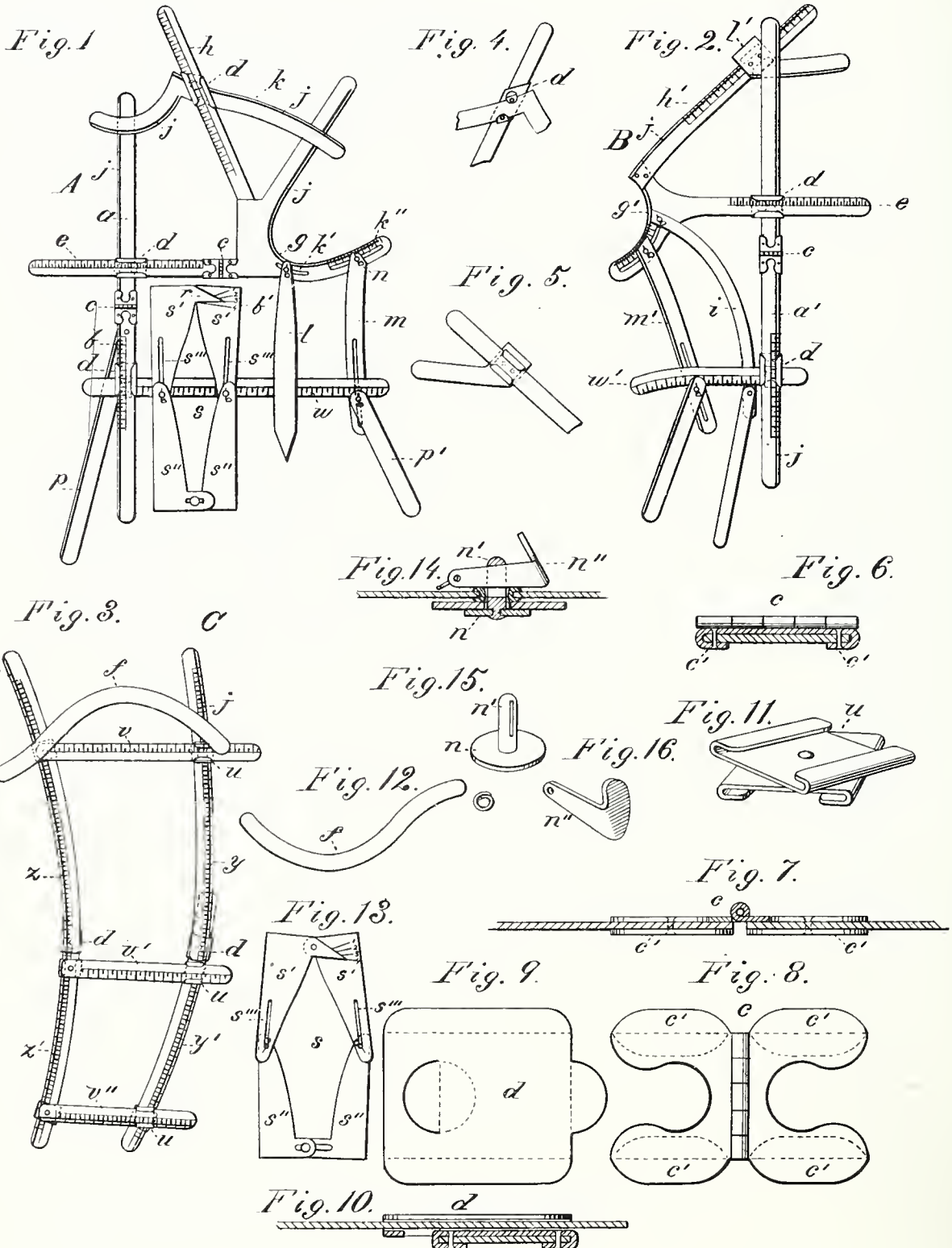
(No Model.)

A. L. B. GRISWOLD.

ADJUSTABLE PATTERN FOR GARMENTS.

No. 281,056.

Patented July 10, 1883.



WITNESSES

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Philip Masai.

INVENTOR

Alice L. B. Griswold,
by Anderson & Smith
ATTORNEYS

UNITED STATES PATENT OFFICE.

ALICE L. B. GRISWOLD, OF PHILADELPHIA, PENNSYLVANIA.

ADJUSTABLE PATTERN FOR GARMENTS.

SPECIFICATION forming part of Letters Patent No. 281,056, dated July 10, 1883.

Application filed November 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, ALICE L. B. GRISWOLD, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and valuable Improvement in Adjustable Patterns for Garments; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings represents a plan view of the pattern for cutting the front portion of a dress; Fig. 2, a plan view of the back-pattern; Fig. 3, the sleeve-pattern. Figs. 4 and 5 are details showing the reverse sides of the slides used on the front and back patterns at the neck. Figs. 6, 7, and 8 are detail views showing cross-section, longitudinal section, and plan view of the hinge. Figs. 9 and 10 are details showing a longitudinal section and plan view of the slide. Fig. 11 is a perspective view of the pivoted double slide. Fig. 12 shows the double curved strip reversed as for the under portion of the sleeve. Fig. 13 is a detail view of the independent waist-dart. Figs. 14, 15, and 16 are detail views of the button-fastening.

This invention has relation to adjustable patterns for the use of tailors, mantua-makers, and others in cutting garments; and it consists in the construction and novel arrangement of the dart under the arm-seye, adjustable in a slot of the arm-seye strip; of the free or independent waist-dart having longitudinal and pivotal adjustment and an angle index and scale; of the reversible guide-strip, serving for cutting the upper end of either the outside arm or the inside arm, all as hereinafter set forth; and particularly pointed out in the appended claims.

In the accompanying drawings, the letter A designates a pattern for cutting the front of a woman's dress; B, a pattern for the back, and C a pattern for the sleeve. These patterns are formed of strips of paper or other suitable material, and are sufficiently flexible to be applied to and adjusted on the person and then laid upon cloth or pattern-paper, forming a convenient and correct guide.

The front-pattern consists of the central vertical strip, *a*, having a scale, *b*, at the waist portion, and a hinge, *c*, above the scale to enable this long strip to be folded, so that the pattern can be conveniently carried about. The hinge *c* consists of two sheet-metal branches having the lateral wings *c'*, folded or bent toward each other, and forming receptacles for the ends of the strip-sections, which are secured thereto by small rivets, as shown in the drawings. Above the hinge the strip *a* is provided with a slide, *d*, in which the breast-strip *e* is adjustable.

g indicates the curved arm-rule, to which the oblique main rule *h* and the breast-rule *e* are rigidly attached or connected, the latter having a hinge-joint, *e*, for convenience in folding.

k represents the neck-rule, having a slide, *d*, in which the main rule *h* is adjustable. In the lower branch of the curved arm-rule are formed an inner slot, *k'*, and an outer slot, *k''*, to which, respectively, the pendent dart *l* and the side strip, *m*, are connected by button-fastenings *n*, having slotted pivot-stems *n'* and wedge-keys *n''*, extending through the slots of the stems. The wedge-key is provided with a ring or stop at its smaller end to prevent its entire removal from the slot of the stem.

The lower branch of the central front strip, *a*, is provided with a pivoted extension, *p*, and the side strip, *m*, is provided with a pivoted extension, *p'*, which is vertically adjustable, being connected to the side strip by a pivot-button and wedge-key.

w indicates the waist-strip, which is provided with a slide, *d*, and is adjustable on the front strip, *a*. Curved extensions *w'*, also provided with slides, serve to lengthen the waist-strip when necessary, in applying the pattern to fleshy persons.

s represents the independent angularly and vertically adjustable waist-dart, which consists of two upper pieces, *s'*, pivoted together at their upper ends, and provided with the longitudinal slots *s'''*, extending toward their lower ends, and two lower pieces, *s''*, pivoted together at their lower ends and connected to the upper pieces by means of the slots and pivot-buttons having wedge-keys. The lower pieces are laterally adjustable at their lower ends. The upper pieces, *s'*, are provided one

with an angle-scale, *b'*, and the other with an index-projection, *v*, whereby the angular spread of the dart may be noted.

5 In the back-pattern B the letter *a'* represents the central or back strip, having a hinge, *e*, and slide *d*, for the chest-rule *e'*, which is a horizontal branch of the arm-rule *g'*. The shoulder-strip *h'* extends obliquely from the arm-rule, and is rigidly connected thereto.
10 Upon the shoulder-strip slides the adjustable neck-rule *l'*. The arm-rule is slotted, and by means of pivot-buttons and wedge-keys the side strip, *m'*, and curved back-strip *i* are connected thereto. The waist-strip *w'* is provided with a slide, and is adjustable on the
15 lower section of the back-strip *a'*. The side strip and back-strip are provided with extensions.

The sleeve-pattern C consists of an outer
20 rule, *y*, an inner rule, *z*, and width-rules *v*, *v'*, and *v''*, pivoted to the inner rule at different points and provided with pivoted double slides *u* for effecting a double adjustment. Both outer and inner rules are made in two
25 sections, *y'*, and are provided with slides *d*, whereby a vertical adjustment can be effected to lengthen or shorten the pattern.

f designates the reversible double curved strip, whereby the top of the outer sleeve and
30 the top of the inner sleeve can be cut, the convex side being applied for the outer sleeve and the concave side for the inner sleeve.

In order to indicate accurately the guideline of each strip which is used in marking or

cutting, a broad black line, *j*, is made along 35 its working-edge.

I am well aware that it is not new to form adjustable patterns of strips, and that the general arrangement of the guide-strips indicated in the patent to H. A. Fowler, dated May 13, 40 1862, is similar to mine. I do not, therefore, broadly claim such devices; but

What I claim, and desire to secure by Letters Patent, is—

1. The combination, with the front arm- 45 rule having the inner slot, *k'*, of the adjustable pendent dart *l*, substantially as specified.

2. The independent waist-dart *s*, having longitudinal adjustment, whereby it is shortened or lengthened, and angular adjustment regulated by an angle index and scale, substantially 50 as specified.

3. The long central strips *a a'* and the breast-strip *e*, made in sections, and having the sheet-metal hinges *e*, formed with bent lateral wings 55 *e'*, substantially as specified.

4. Longitudinally-adjustable sleeve-strip sections *y'*, connected by pivot-slides *d*, and having width-rules *v v' v''*, provided with pivoted double slides *u* for double adjustment, 60 substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALICE L. B. GRISWOLD.

Witnesses:

ELIZABETH P. TREADWAY,
JOS. H. NICHOLS.

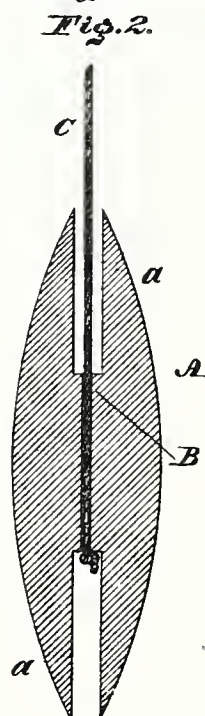
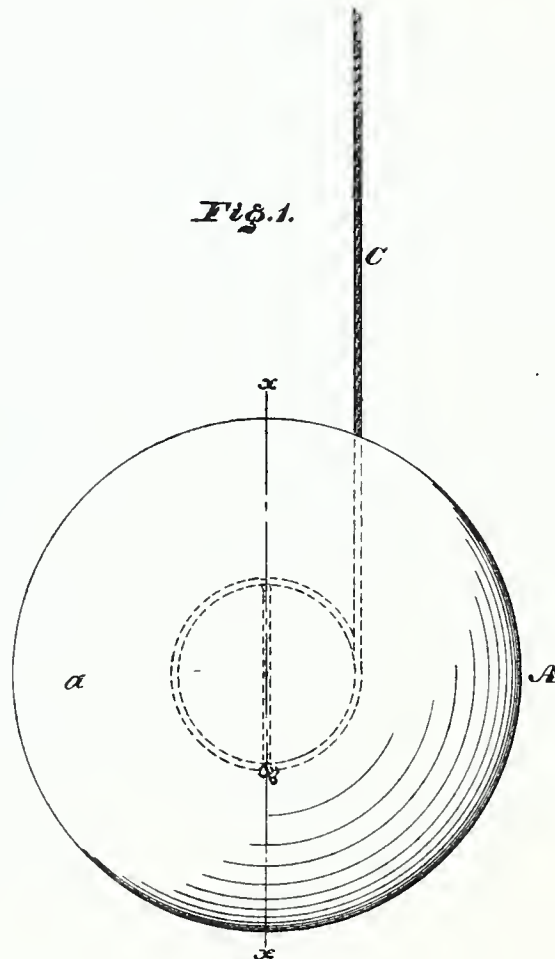
(No Model.)

M. STREISGUTH & E. SCHNITZLER.

BANDELORE TOY.

No. 279,888.

Patented June 19, 1883.



WITNESSES:

L. O. Bramby
H. F. Fischer

INVENTORS:

Marie Streisguth,
Emma Schnitzler,
BY *Johann Diederichsen* ATTORNEY.

UNITED STATES PATENT OFFICE.

MARIE STREISGUTH AND EMMA SCHNITZLER, OF PHILADELPHIA, PA.

BANDELORE TOY.

SPECIFICATION forming part of Letters Patent No. 279,888, dated June 19, 1883.

Application filed March 30, 1883. (No model.)

To all whom it may concern:

Be it known that we, MARIE STREISGUTH and EMMA SCHNITZLER, both citizens of the United States, and residents of the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Bandelore Toys, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation of the bandelore toy embodying our invention. Fig. 2 is a section thereof in line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

Our invention consists in forming the roller portion of a bandelore toy of a single piece of material, whereby it is strong and inexpensive, as will be hereinafter set forth, the outer faces of the disks of the toy being convex, whereby sharp edges are presented, the curvature being unbroken from centers to peripheries, and the disks revolve with greater freedom and uniformity, and the centers of the disks are of increased strength, the hub also being solid.

Referring to the drawings, A represents the roller portion of a bandelore toy formed of the side disks, *a*, and the connecting-hub B, the latter having secured to it one end of the cord C, the operation of the toy being well known. The disks are of convex form on their outer face, so that the center of the roller is strengthened, and the edges are sharp or pointed, by which provision the roller rotates with more ease and uniformity than where the edges are blunt or abrupt shoulders are formed on the outer sides of the disks.

It will be seen that the disks and hub are formed of one piece of wood, properly turned or otherwise cut into shape, by which construction the toy is strong, durable, and inexpensive.

A bandelore toy has been formed of separate disks, each secured to a hub, thus making the same of three pieces of material, adapted to become loose and rattle, and there is a difficulty of rigidly connecting the pieces unless expensive joints are employed, all of which objections are avoided by our construction. Furthermore, our hub may be made of large diameter to secure a strong connection for the cord and provide a large winding-surface therefor.

Disks and hubs have also been made of one piece of material; hence we do not claim this feature, broadly.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

A bandelore toy formed of solid side pieces and solid connecting-hub formed of one piece of wood, the exterior faces of the side pieces or disks being convex, whereby the centers are swelled outwardly and the peripheral edges are sharp, the curvature of the disks being unbroken from center to periphery, substantially as and for the purpose set forth.

MARIE STREISGUTH.
EMMA SCHNITZLER.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. GRANT.

(No Model.)

H. A. BLANCHARD.

SPOOL CASE.

No. 276,344.

Patented Apr. 24, 1883.

FIG. 1.

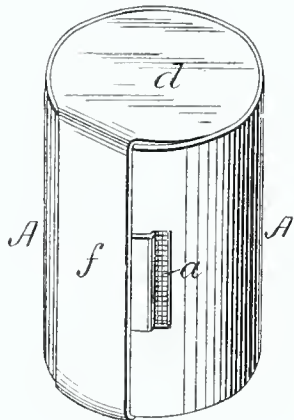


FIG. 2.

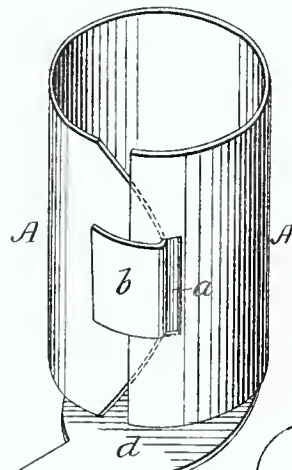


FIG. 3.

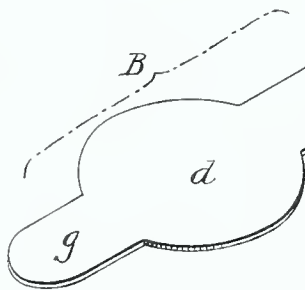
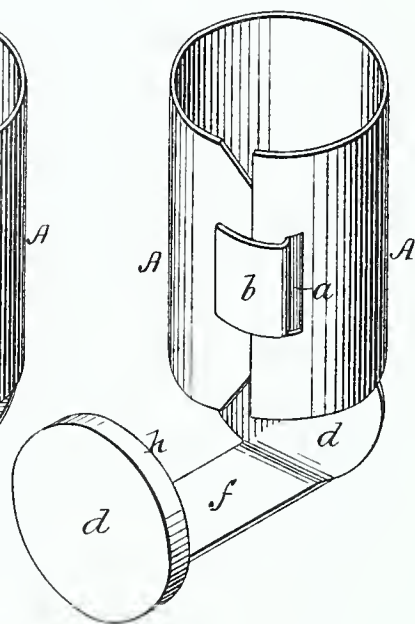


FIG. 4.

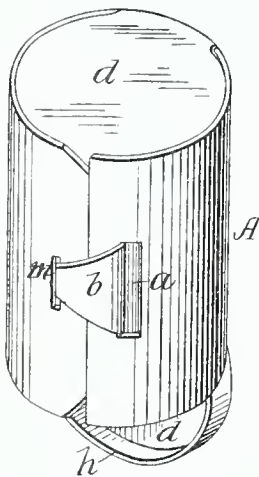


FIG. 5.

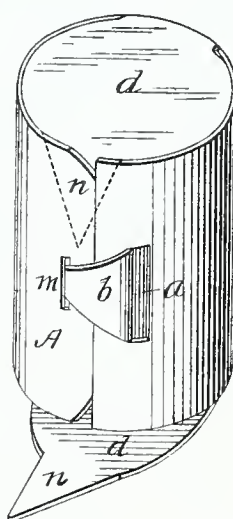


FIG. 6.

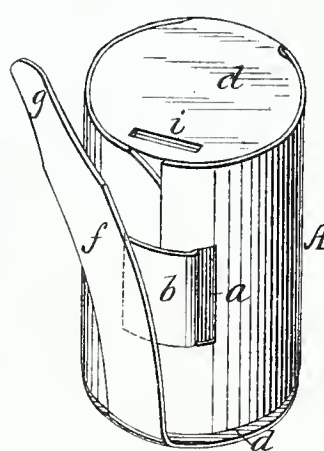
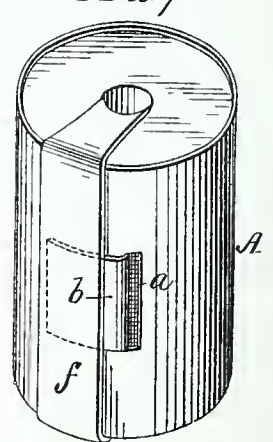


FIG. 7.



WITNESSES:

Harry L. Achenfelter.
James F. Jobin

INVENTOR:

Helen A. Blanchard
by her Attorneys
Howson and Fry

UNITED STATES PATENT OFFICE.

HELEN A. BLANCHARD, OF PHILADELPHIA, PENNSYLVANIA.

SPOOL-CASE.

SPECIFICATION forming part of Letters Patent No. 276,344, dated April 24, 1883.

Application filed March 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, HELEN A. BLANCHARD, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented
5 an Improved Spool-Case, of which the following is a specification.

The object of my invention is to provide a cheap and convenient cover or case for spools of silk, cotton, thread, &c., whereby the con-
10 tents of the spool are kept clean and prevented from being accidentally unwound, and the spool is ready for immediate delivery to a purchaser without further wrapping.

In the accompanying drawings, Figure 1 is
15 a view of a spool with my improved cover or envelope in its preferred form; Fig. 2, a detached view of the cover, and Figs. 3, 4, 5, 6, and 7 views showing modified forms of the cover or envelope.

20 In Figs. 1 and 2 the cover shown comprises the strip A and projection B. The strip A is of proper size to envelop the body of the spool, and near one edge of said strip is formed a slot, *a*, the opposite edge of the strip form-
25 ing a tongue, *b*, adapted to the slot, so that when the strip A is bent around the spool its ends may be interlocked, as shown in Fig. 2, and the spool thereby inclosed. The projec-
30 tion B is formed on one edge of the strip A, and comprises the end covers, *d d*, the connecting-strip *f*, and the tongue *g*. After the strip A has been folded around the spool and its ends interlocked, as shown in Fig. 2, the pro-
35 jection B is brought around, as shown in Fig. 1, so that the portions *d d* cover the ends of the spool, and the strip *f* covers and protects the interlocked joint of the strip A, the parts being retained in this position by tucking the tongue *g* in between the head of the spool and
40 the strip A. The color of the contents of the spool can be seen through the slot *a*, so that the spool need not be uncovered for this purpose, and the end of the thread can be drawn through the slot *a*, to permit the unwinding of
45 the thread from the spool without removing the cover. The contents of the spool are thus protected from injury or deterioration due to handling, not only when the spool is in use, but also during transportation or when on
50 sale, and the spool, when provided with the improved envelope, is in condition for delivery

to the purchaser without further wrapping. Accidental unwinding of the thread from the spool is also prevented by the cover, and when a number of spools are placed together in a
55 work-basket or other receptacle the entangling of the threads is prevented.

The covers are inexpensive, as they can be readily cut in large quantities from flat sheets of paper by a suitable die.
60

While I prefer the form of cover shown in Figs. 1 and 2, the same is not absolutely necessary to the carrying out of my invention. For instance, in Figs. 3, 4, 5, 6, and 7, I have shown
65 other forms of spool-coverings in which the essential features of my invention are embodied. The cover, Fig. 3, has a cap, *d*, with a rim, *h*, in place of the tongue *g*, this rimmed cap being adapted to fit over the end of the spool and its inclosing-strip A. In Fig. 4
70 both end caps are made with rims, which are applied to the heads of the spool before the strip A is closed around the same. In this case, also, the end of the tongue *b* of the strip A is retained by tucking it into a slot, *m*, in
75 the strip, instead of by a covering-strip, *f*. In Fig. 5 the end caps have tongues *n* instead of rims, and the opposite ends of the strip A are secured in the same manner as in Fig. 4. In
80 Fig. 6 the retaining-strip *f* is used, and said strip has at the end a tongue, *g*, which is adapted to a slot, *i*, in one of the end caps *d*. In Fig. 7 the strip *f* is separate from the strip A and the end caps are dispensed with, the
85 ends of the strip *f* being retained by tucking them into the central opening of the spool.

The cover furnishes a ready and convenient means of displaying any trade-marks or ad-
90 vertisements which the manufacturer or dealer may desire to apply to the goods, the surface of the strip A, as well as the ends *d*, being available for this purpose. The cover may, if desired, be made of a size sufficient to contain two or more spools instead of a single spool,
95 as shown.

I claim as my invention—

1. A spool case or cover consisting of a strip, A, having at one end a tongue and at the other end a slot for the reception of said
100 tongue and the exposure of the thread, as set forth.

2. A spool case or cover consisting of a

strip, A, having ends constructed so as to interlock, and a strip, *f*, adapted to cover and protect the joint thus formed, as specified.

3. A spool case or cover comprising the
5 strip A, with interlocking ends, the end caps, *d*, and strip *f*, as set forth.

In testimony whereof I have signed my name

to this specification in the presence of two subscribing witnesses.

HELEN A. BLANCHARD.

Witnesses:

HARRY L. ASHENFELTER,

HARRY SMITH.

(No Model.)

A. H. SINCLAIR.

DRAWING BOARD.

No. 269,601.

Patented Dec. 26, 1882.

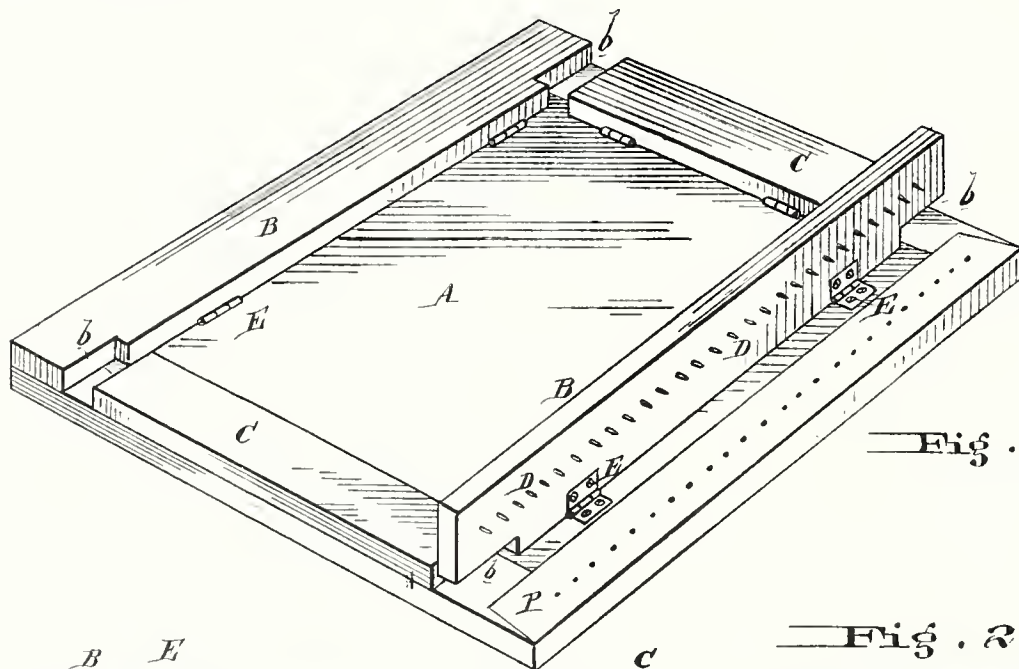


Fig. 1

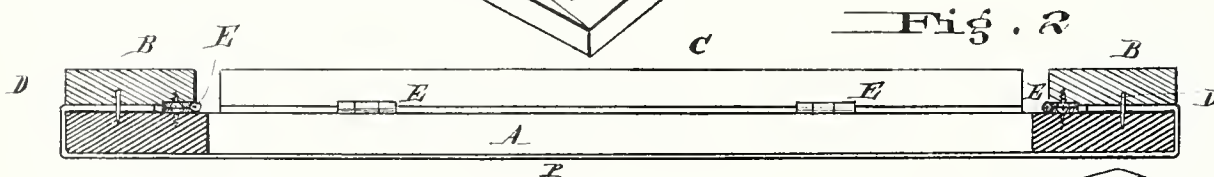


Fig. 2

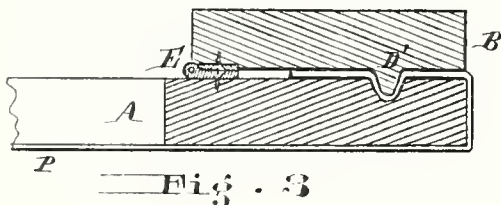


Fig. 3

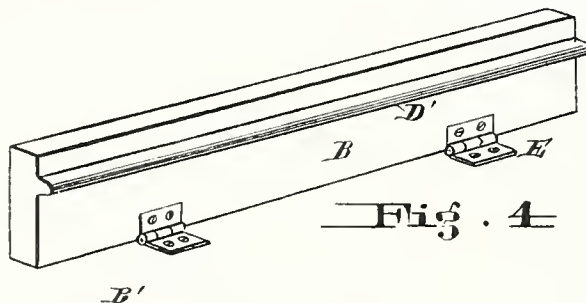


Fig. 4

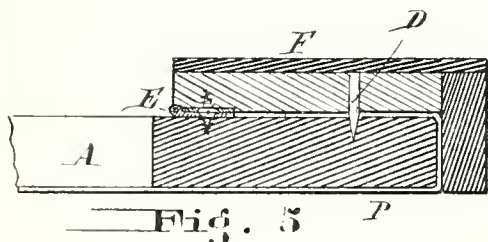


Fig. 5

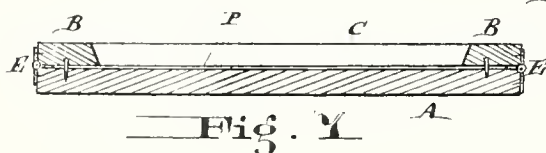


Fig. 6

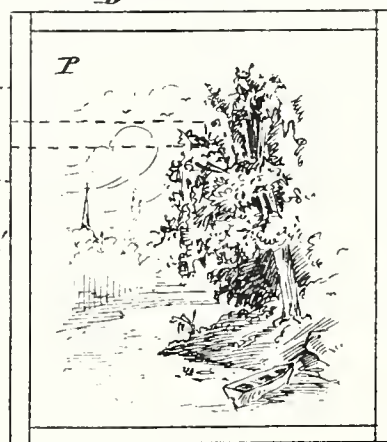


Fig. 7

Attest
L. J. Mabe
[Signature]

Inventor
Annie H. Sinclair
By her atty-

[Signature]

UNITED STATES PATENT OFFICE.

ANNIE H. SINCLAIR, OF PHILADELPHIA, PENNSYLVANIA.

DRAWING-BOARD.

SPECIFICATION forming part of Letters Patent No. 269,601, dated December 26, 1882.

Application filed October 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, ANNIE H. SINCLAIR, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Drawing-Boards, of which the following is a specification.

My invention has reference to drawing-boards for both artistic and mechanical drawing; and it consists in providing the board or skeleton frame with hinged slats on the back thereof and close to its edges, and providing said slats with points or projections, which are adapted to be pressed down upon the paper or canvas to hold it in position, and in many details of construction, all of which are fully set forth in the following specification and shown in the accompanying drawings, which form part thereof.

The object of this invention is to provide a drawing board or frame with suitable means wherewith the drawing paper or canvas may be secured temporarily in position, and, if desired, allow the paper to be "stretched," as is done in cases in which the panel drawing-boards are used; further, to reduce the expense in the manufacture of a drawing-board adapted to the purposes for which this invention is designed.

In the drawings, Figure 1 is a perspective view of my improved drawing-board, looking from the rear. Fig. 2 is a cross-section of same. Fig. 3 is a cross-section of one edge of the board, showing a substitute for the pins. Fig. 4 is a perspective view of the slats used in the construction shown in Fig. 3. Fig. 5 is a similar section, and shows a modification of the slat. Fig. 6 is a front view of the board with the modification shown in Fig. 5 applied thereto, and Fig. 7 is a cross section of the board with the slats arranged upon the face.

A is the board or skeleton frame.

B B and C C are the hinged slats, and are secured to the board or frame by hinges E a short distance from the edges and equal to the width of the slat. The slats B are longer than slats C and extend the full length of the board, as shown, and on their hinged side they are notched, as at *b*, to allow the paper P to be placed under to form a square corner. The face of all of these slats adjacent to the board or frame are provided with points or projec-

tions D, which, when the slats are pressed down upon the paper, pass through said paper and extend into the frame or board, as shown.

To cheapen the construction, the pins D may be driven through a pine slat and held therein by a veneer, F, of hard wood.

In place of pins D, a rib or projection, D', may be used, extending the entire length, the said rib squeezing the paper into a corresponding groove in the rear of the board.

To make the board better adapted for mechanical drawings, the edges of the slats may be extended at right angles, as shown at B', and which, when the paper is stretched and ready for use, come flush with said paper, so that they may be used as straight edges for the T-square, as shown in dotted lines in Fig. 6.

In place of putting the slats on the back, they may be hinged around the edges of the board or frame and on the front, as shown in Fig. 7; but I prefer the construction shown in Fig. 1.

In stretching the paper on the board the paper is first wet, and, when expanded, is laid upon the face of the board, and the edges are doubled over and clamped by slats and pins, and when the paper dries it is as tight as a drum-head.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A drawing board or frame provided with hinged slats arranged about its edges, the said slats being provided with means to catch and hold the paper or canvas, and recesses upon their hinged edges to allow the paper to be bent over the back of the board and under the said slats, substantially as and for the purpose specified.

2. A drawing board or frame provided with hinged slats arranged about its edges, the said slats being provided with pins which pass through the paper or canvas when said slats are folded down against the board or frame, two of said slats being the full length of the board and the other two being equal in length to the distance, or thereabout, between the two long slats, substantially as and for the purpose specified.

3. The combination of board or frame A, slats B, provided with pins D and notches *b*,

slats C, provided with pins D and hinges E, as shown and described.

4. The combination of board or frame A, hinges E, and slats B C, provided with pins
5 D, one or more of said slats being extended, as at B', to form a straight edge outside and flush with the stretched paper, substantially as and for the purpose specified.

5. The combination of board or frame A,
10 hinges E, and slats B C, consisting of soft wood covered on the back with a hard-wood

veneer, and pins D, the said veneer acting to prevent the pins being pressed back into the soft wood, substantially as and for the purpose specified.

In testimony of which invention I hereunto
set my hand.

ANNIE H. SINCLAIR.

Witnesses:

R. A. CAVIN,

R. S. CHILD, Jr.

(No Model.)

H. M. LINDENTHAL.
EGG SHELF.

No. 276,612.

Patented May 1, 1883.

Fig. 1.

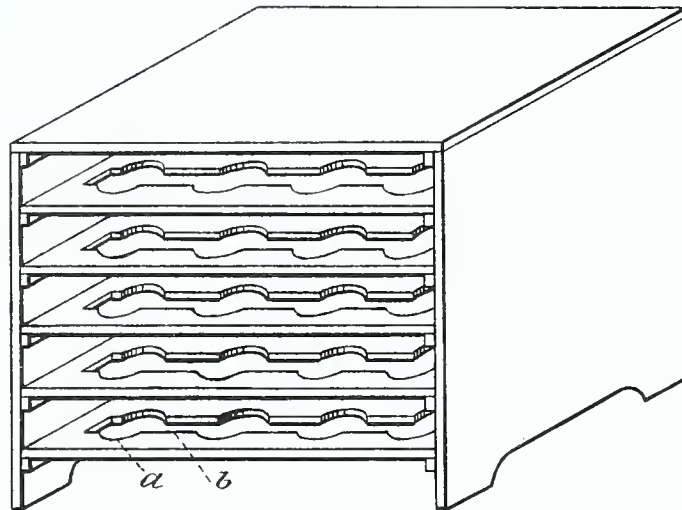
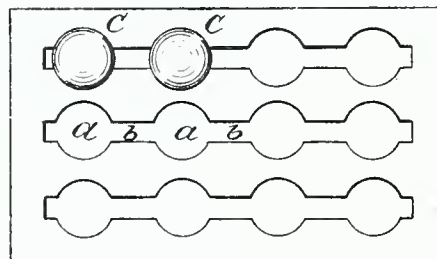


Fig. 2.



Witnesses:

Eust Haas
Robt C. Johnston

Inventor:

Hattie May Lindenthal

UNITED STATES PATENT OFFICE.

HATTIE MAY LINDENTHAL, OF SEWICKLEY, PENNSYLVANIA.

EGG-SHELF.

SPECIFICATION forming part of Letters Patent No. 276,612, dated May 1, 1883.

Application filed March 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, HATTIE MAY LINDENTHAL, residing at Sewickley, in the county of Allegheny and State of Pennsylvania, have
5 invented a new and useful Egg Shelf or Case, of which the following is a specification, reference being had to the accompanying drawings, in which—

10 Figure 1 represents the shelves in an inclosing-case, and Fig. 2 a single shelf.

The object of my invention is to keep eggs in good condition for convenient use in house-keeping and during transportation.

15 The shelves are constructed of a solid piece of wood, having rectangular slots *b*, which are scalloped out at intervals on each side thereof, forming openings *a* to hold the eggs in an end-wise or upright position. The scallops may be

made of different sizes, providing for difference in the sizes of the eggs. 20

I am aware that an egg-tray has been made with a bottom formed of parallel slats set apart from each other, and having in their opposing edges and at the upper side of those edges curved semi-seats for eggs. 25

What I claim is—

A diaphragm or shelf for cases, made of wood, and having holes and connecting-slots in its body, in contradistinction to separate opposed slats having curved semi-seats in their respective edges, as and for the purpose set forth. 30

HATTIE MAY LINDENTHAL.

Witnesses:

GUST. HAAS,

ROBT. C. JOHNSTON.



(No Model.)

4 Sheets—Sheet 1.

F. L. VEERKAMP, C. F. LEOPOLD & W. DARKER.

BRAIDING MACHINE.

No. 277,523.

Patented May 15, 1883.

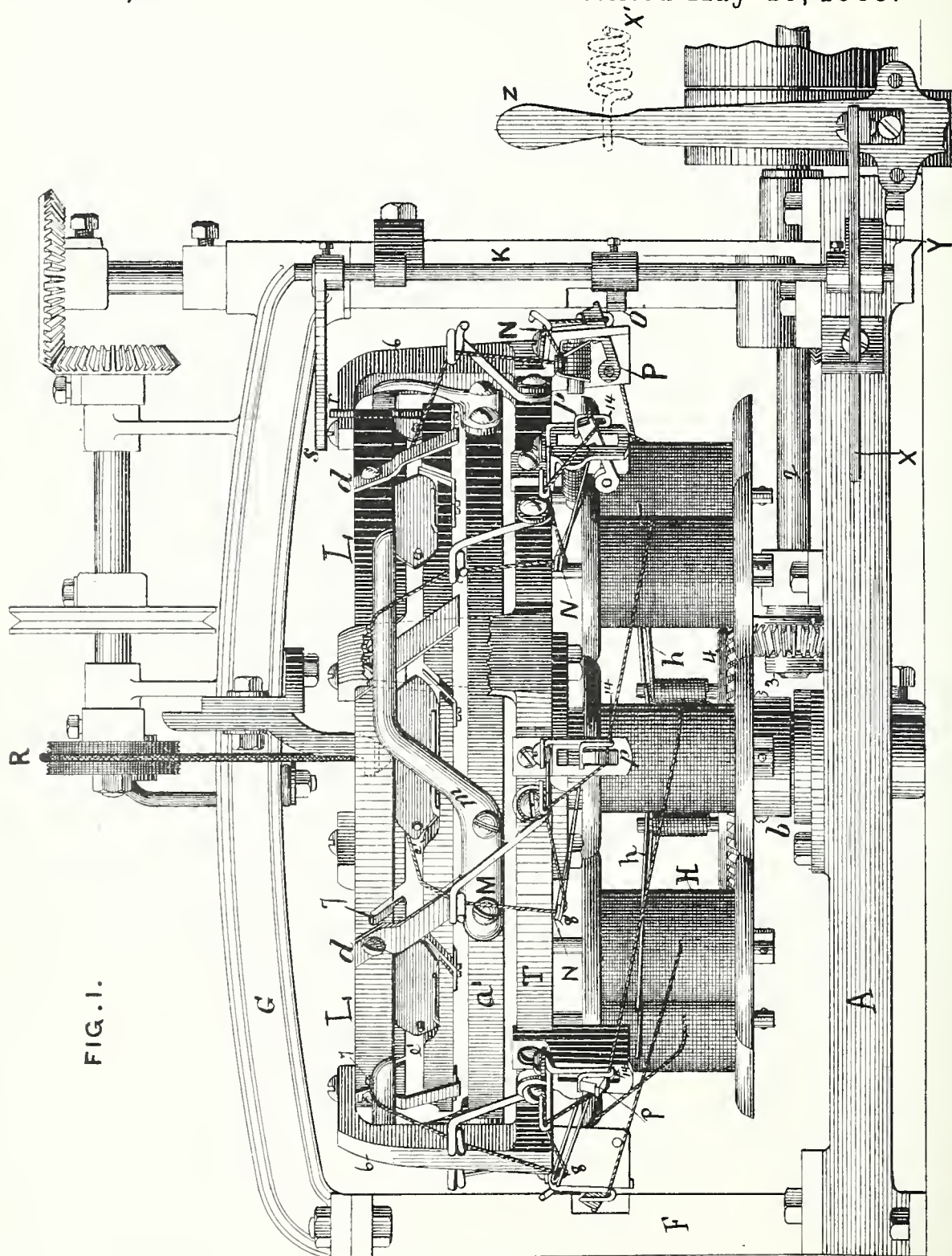


FIG. 1.

WITNESSES:

Francis Shunk Brown

John Adams

INVENTORS

*F. L. Veerkamp, C. F. Leopold
and W. D. Darker, by*

H. J. Fulton

ATTORNEY

(No Model.)

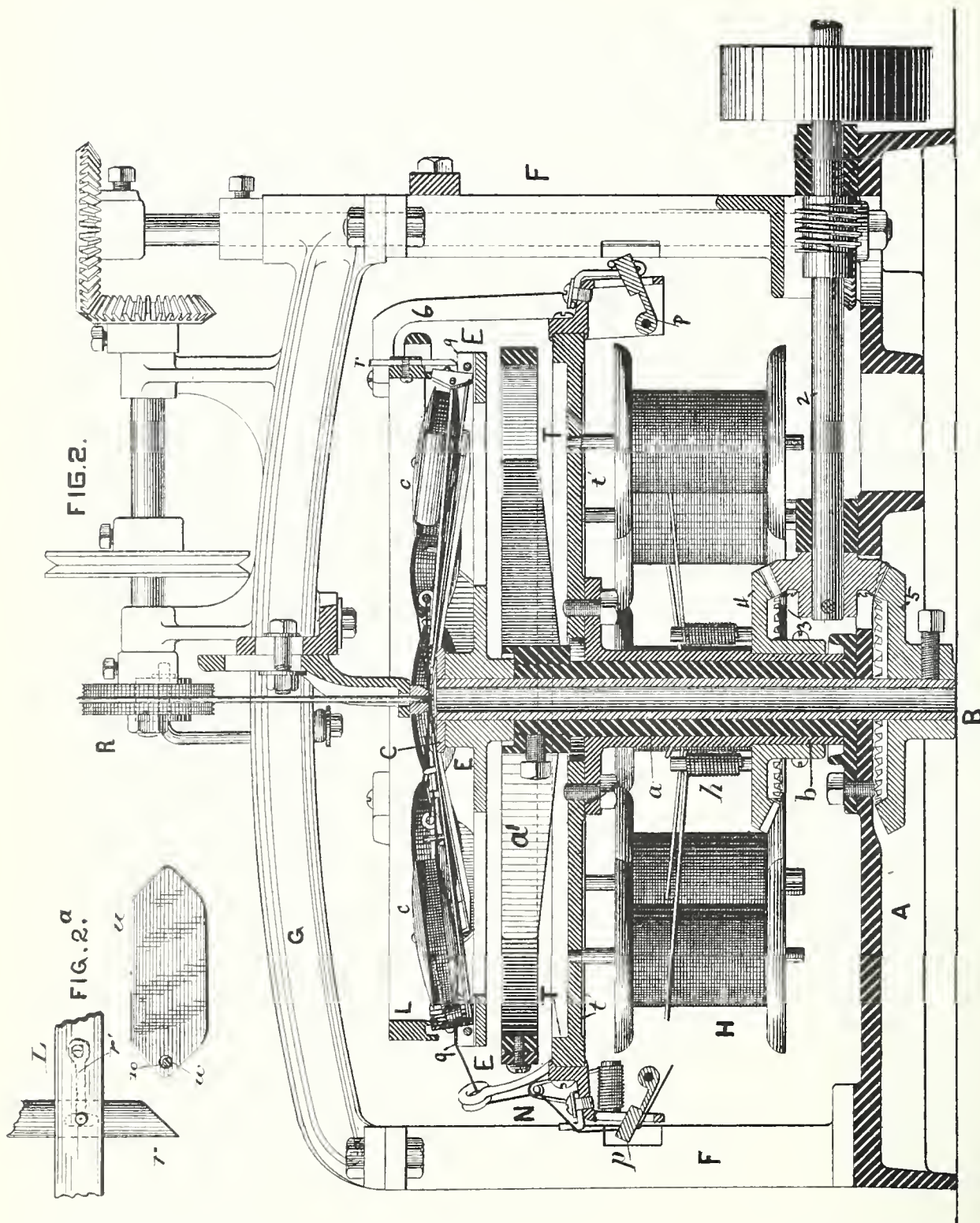
4 Sheets—Sheet 2.

F. L. VEERKAMP, C. F. LEOPOLD & W. DARKER.

BRAIDING MACHINE.

No. 277,523.

Patented May 15, 1883.



WITNESSES:

Francis Shunk Brown

John Adams

INVENTORS

F. L. Veerkamp, C. F. Leopold
and W. D. Darker, by

H. J. Fenton

ATTORNEY

(No Model.)

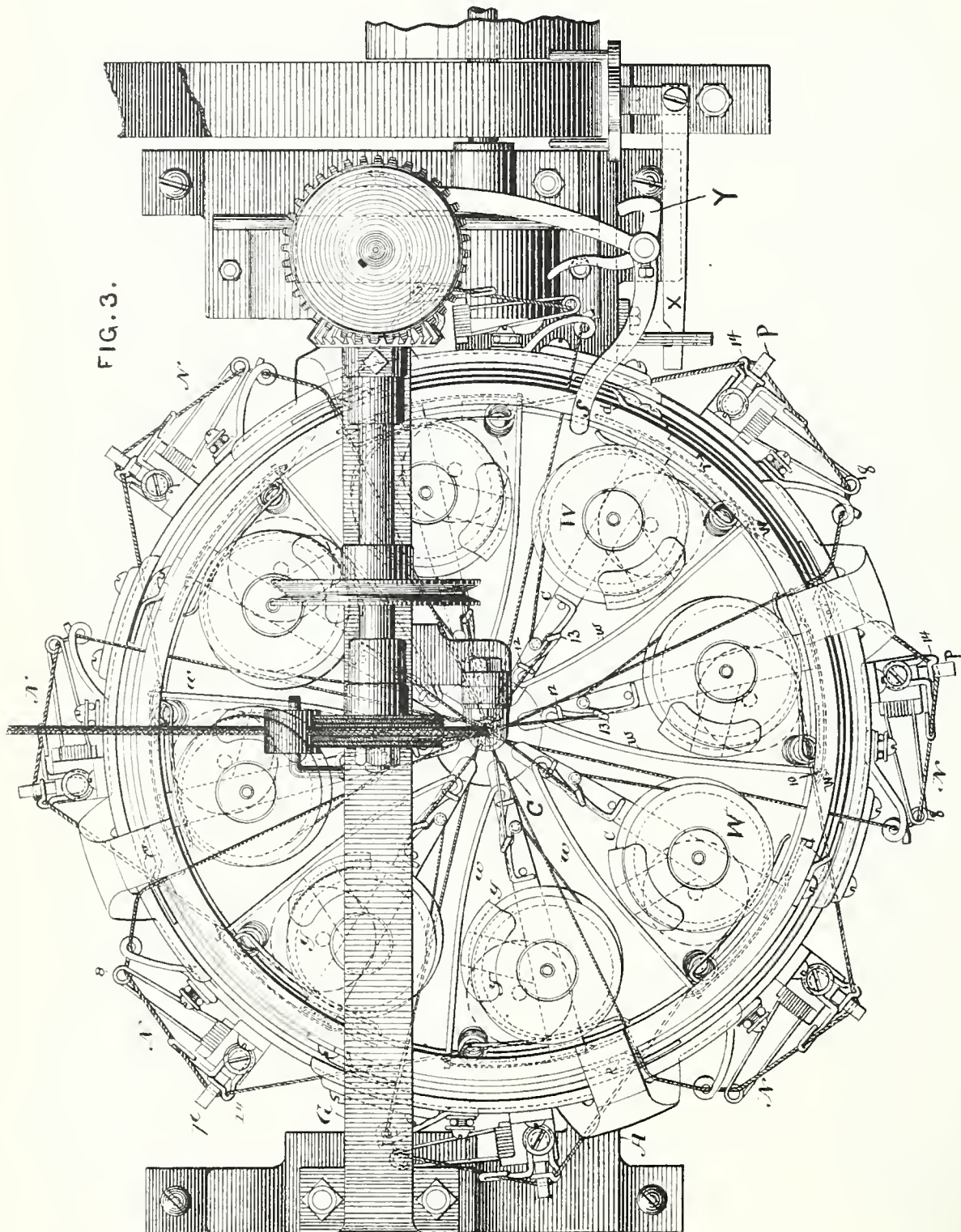
4 Sheets—Sheet 3.

F. L. VEERKAMP, C. F. LEOPOLD & W. DARKER.

BRAIDING MACHINE.

No. 277,523.

Patented May 15, 1883.



WITNESSES:

Francis Shunk Brown
John Adams

INVENTORS

F. L. Veerkamp, C. F. Leopold,
and Wm Darker,
by H. J. Fulton

ATTORNEY

(No Model.)

4 Sheets—Sheet 4.

F. L. VEERKAMP, C. F. LEOPOLD & W. DARKER.
BRAIDING MACHINE.

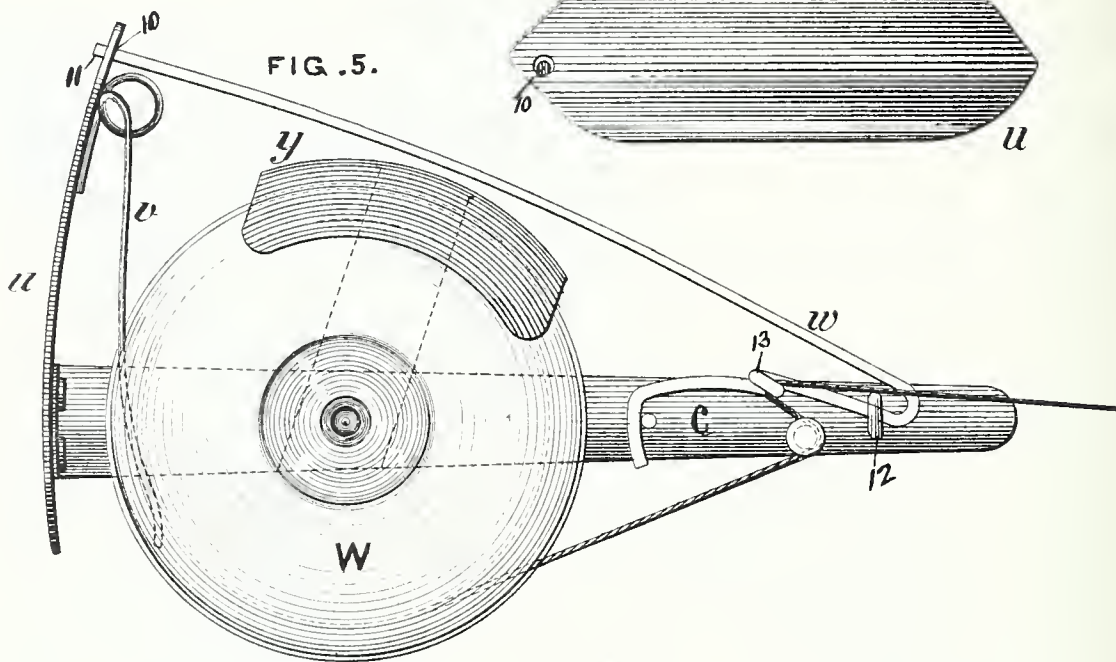
No. 277,523.

Patented May 15, 1883.

FIG. 4.



FIG. 5.



W FIG. 6.

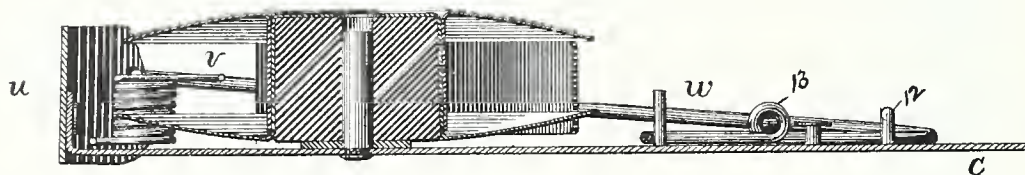
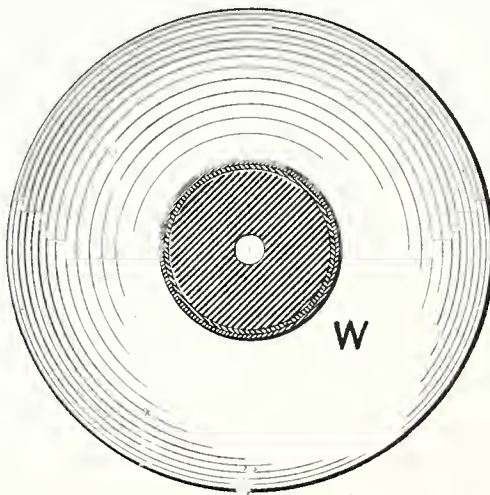


FIG. 7.



WITNESSES:
Francis Shunk Brown
John Adams

INVENTORS
F. L. Veerkamp, C. F. Leopold
and W. D. Darker, by
H. J. Fulton,
ATTORNEY

UNITED STATES PATENT OFFICE.

FLORENCE L. VEERKAMP, CHARLES F. LEOPOLD, AND WILLIAM DARKER,
OF PHILADELPHIA, PENNSYLVANIA.

BRAIDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 277,523, dated May 15, 1883.

Application filed January 24, 1882. (No model.) Patented in England July 11, 1882, No. 3,288.

To all whom it may concern :

Be it known that we, FLORENCE L. VEERKAMP, CHARLES F. LEOPOLD, and WILLIAM DARKER, citizens of the United States, residing in the city of Philadelphia, in the State of Pennsylvania, have jointly invented certain new and useful Improvements in Braiding-Machines, of which the following is a specification.

Our invention relates to improvements in rotary braiding-machines in which two sets of bobbins move in contrary directions in concentric annular paths, as described in Letters Patent of the United States granted to F. L. Veerkamp and C. F. Leopold, No. 56,643, dated July 24, 1866; and our improvements consist in mechanism hereinafter described, whereby we are enabled to dispense with many features of the old machine and attain a greater speed in operating the same and produce a larger product in a given time; in mechanism which greatly diminishes the liability to break threads, and in the several parts of the machine, more especially the carrier-bearer for sustaining and conducting the carriers and bobbins around the machine, the grooved ring in which the carriers move, the guiding mechanism for directing the course of the threads and interlocking the same, the tension mechanism for taking up slack thread, the devices for stopping the operation of the machine when a thread breaks or runs off the bobbin, and in the construction of the bobbin-carriers. In the former machine, referred to, the threads of the outer and lower bobbins were caused to pass to one side and then to the other of the inner and upper shuttles by means of curved wires or projections on a cam-plate which pushed the threads outward, while weights and springs, which formed a part of a tension device, applied to each of the threads from the lower bobbins operated to draw the threads inward into recesses in a circular plate which supported and carried the lower bobbins, the action of these parts causing the lower threads to pass alternately from one side to the other of each of the upper thread-carrying shuttles, each of which was separately moved or pushed in a groove in a circular plate affixed to the driving mechanism.

In the construction of our improved machine, instead of causing the upper shuttles to be moved in a groove or shuttle-race in the shuttle-carrying plate, and by means of rollers or otherwise, and the lower threads to be carried or guided alternately from one side to the other of the upper shuttles through recesses in the shuttle-plate by means of a cam-plate provided with projections or curved wires, and a spring and weight for each of said lower threads, as in said patent described, our present machine is so constructed as to supply a large number of upper threads from bobbins supported in carriers or holders which are not in themselves movable, but each and all held in a single movable carrier-bearer, which consists of a flat circular plate secured to and revolved by a central shaft, and the outer edges of the bobbin-carriers move in a groove formed in an annular ring placed directly above the carrier-bearer, said ring being supported and revolved by means of uprights secured to the rim of a skeleton plate, T, hereinafter described, attached to a revolving sleeve covering the inner tubular shaft referred to, and the arms of which skeleton plate support the lower bobbins, and to the rim thereof are secured tension-springs for the lower threads. The rim of a stationary plate supported from the center of the machine supports guide-arms, over which the lower threads are drawn and guided by means of push-prongs or thread-carrying guides secured to the rim of the grooved annular ring above the carrier-bearer. Thus the carrier-bearer being revolved in one direction by means of the tubular shaft, and the lower bobbin-holder, with the grooved ring and its thread-carrying guides, being revolved in an opposite direction by means of the revolving sleeve, both by appropriate driving mechanism, the upper and lower threads are by these means crossed, interlocked, and platted to form a cord or braid without any separate movement of each upper bobbin-carrier, or any separate movement of each thread-guiding device, the said bobbin-carriers and said thread-carrying guides being stationary on the carrier-bearer and ring, respectively, which latter alone are revolved or moved in the manner described, which, in connection with the fixed guide-arms

above referred to, causes the lower threads to pass alternately over and under the bobbin-carriers which supply the upper threads.

In order to enable others skilled in the art to make and use our invention, we will proceed to more particularly describe its construction and operation, reference being had to the accompanying drawings, in which—

Figure I is a front elevation of the machine with a part broken away; Fig. II, a sectional view thereof; Fig. III, a top view thereof; Figs. IV, V, VI, and VII, views of the upper bobbin and carrier; and Fig. II^a, a section of the grooved ring and its bolt *r*, showing the vertical edge of the bobbin-carrier.

Similar letters refer to like parts throughout the several views.

The frame-work of the machine consists of the base A, having in its center a hollow cylindrical projection or upright tube, *a*, on the outside of which is placed a revolving sleeve, *b*, and through both sleeve and projection extends a tubular shaft, B, at the upper end of which is placed or secured a small disk, C, for the purpose of supporting the inner ends or stems of the carriers *c*, the outer ends of which rest edgewise on the rim of the carrier-bearer E in recesses *e'*, made at suitable intervals therein. From the base of the machine arise two uprights, F F, with a cross-arm, G, to connect them and hold the take-up device R.

The machine is driven by a main shaft, 2, having on its inner end a bevel-gear wheel, 3, working into a bevel-gear wheel, 4, secured to the revolving sleeve *b*, and the inner tubular shaft, B, is operated by means of a bevel-gear, 5, connecting it with the gear 3 on the main shaft.

The carrier-bearer E is secured to the tubular shaft B, and consists of a flat circular plate, above which is placed a grooved ring, L, supported by uprights 6 from and carried around by the rim of the skeleton plate T, the spokes *t* of which sustain the lower bobbins. The upper sides of the vertical edges of the carriers *c* revolve in the groove of the ring L, to which latter are secured push-prongs *d*, set at proper intervals for directing the course of the lower threads up and over the guide-arms M, and over and under the carriers alternately. The grooved ring L is slotted alongside of each push-prong, and into the slots the lower threads slide to enable them to pass over the bobbin-carriers. The lower threads are guided above and below the upper bobbins alternately by means of stationary horizontal guide-arms M, constructed as shown in Fig. I, secured to the rim of an annular plate, *a'*, which is bolted to the hollow upright tube or projection *a*, (see Fig. II,) the plate and hollow tube being immovable and stationary. Each of the lower threads, which are held taut by their respective tension-springs N, hereinafter mentioned, first presses against the lower end of one of the guide-arms M, thus enabling it to pass under one of the bobbin-carriers *c*, after which it is then carried by a push-prong

d up and over the upper end of the guide-arm M into one of the slots 7 in the grooved ring L, and thus passes over the next bobbin-carrier, and so on alternately.

To the revolving sleeve *b* is secured the annular skeleton plate T, having the spokes *t*, supporting the rods upon which the lower bobbins, H, are placed. Tension-springs *h* pressing against the bobbins prevent them from delivering the thread too freely as the bobbins move around. Other tension-springs, N, secured to the outer edge of the rim T of the bobbin-holder, have each an eye, 8, at the extreme end, through which the thread from a lower bobbin passes, and serve to hold the thread taut on the guide-arms M and take up any slack. Said threads, after passing through the guide-eye 14, and before reaching the eye 8 of the spring N, pass under and sustain drop-pers *p*, which, when a lower thread breaks or runs off the bobbin, fall and strike an arm, *o*, on the upright rod K, which throws the machine out of gear and stops its operation, as hereinafter described. The carrier-bearer E has suitable recesses and abutments, *e'*, to keep the carriers *c* a proper distance from each other, and also bars 9 (see Fig. II) to sustain them radially.

The bobbin-carriers *c* are constructed, as shown in Figs. V and VI, with a vertical edge, *u*, which moves in the groove of the ring L, a shield, *y*, over and under which the lower threads pass alternately, a tension-spring, *v*, adapted to bear against the thread on the bobbin, and a stopper-rod, *w*, which radiates from the center of the machine, and has its outer end supported in an opening, 10, (see Figs. III, IV, and V,) in the vertical edge *u*. The stopper-rod *w*, on and near its inner end, is provided with an eye, 13, through which the thread from the bobbin passes, and when a thread breaks or runs off the bobbin the said rod, which plays loosely in the hook 12, (see Figs. III and V,) is set free, and by centrifugal force is thrown out through the opening 10 sufficiently far to strike the lower beveled end of the bolt *r* and elevate it enough to hit the latch *s* on the upright rod K (see Figs. I and II) and stop the machine. This bolt *r* is beveled at its lower end, as shown in Fig. II^a, and works freely up and down in a suitable recess on the outer surface of the grooved ring L, and a flat spring (shown in dotted lines in Fig. II^a) keeps the bolt *r* elevated after having been raised by the stopper-rod *w*; or, as shown in Fig. II, the grooved ring may be slotted perpendicularly to receive the vertical bolt *r*, which latter is slotted in the part which is within the slot of the grooved ring, and is supported by a set-screw passing through the grooved ring and through the slot of the bolt. Thus when the bolt *r* is elevated by the stopper-rod *w* it will be kept elevated by its frictional contact with the adjoining parts, and will engage with the arm *s* of the stopping mechanism on coming around to the same. The rod K revolves loosely in a slot in the base

of the machine, and has affixed to it by a set-screw a sleeve provided with a cam, Y, which cam, when the rod K is moved, operates to unhook the rod X, connected with the lever Z, which, when released, is operated, by means of the spring X', to shift the driving-belt from the tight pulley to the loose one.

The upper bobbins, W, (shown in Figs. IV and VII,) are made of any suitable metal, and are formed convex to give strength, and to aid in shedding the lower threads as the latter pass over and under the carriers alternately. It is essential that they should be of the form shown. The heads of the bobbins are each spun with a sleeve in the center, one slipping over the other and forming the barrel, a suitable wooden hub being inserted.

The operation of the machine is as follows: Motion being given by means of the driving-shaft, the lower bobbin-holder, with its bobbins, moves in a circle, and the carrier-bearer, with its carriers and bobbins, in a contrary direction. The threads from the lower bobbins are directed by the push-prongs along underneath the carriers, then up and along the guide-arms and over the next carriers, thus causing each of the lower threads to pass alternately over and under the upper bobbins and carriers, interlocking the threads and producing the braided cord, which is drawn up through a suitable guide by the take-up device R, located over the central disk.

It is apparent that the number of upper and lower bobbins may be increased or diminished, and that the construction and arrangement of many of the parts may be varied without departing from the main features of the invention. In our improved machine, herein described, the movements of necessary parts and the consequent wear and tear thereof are reduced to a minimum and excessive friction thereby avoided, and the machine can be run at a high velocity, producing a greatly-increased product in a given time as compared with former machines.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a braiding-machine, of a set of upper bobbin-carriers, a revolving carrier-bearer, and devices for supporting a set of lower bobbins, with mechanism for revolving the carrier-bearer and lower bobbin-holder in contrary directions from each other in concentric annular paths, but in different planes, stationary or fixed guides, lower thread-carrying guides, and mechanism for supporting and moving the thread-carrying guides, whereby the threads from each of the lower bobbins

are made to cross alternately over and under the threads from each of the upper bobbins and be platted to form cord-braid, substantially as set forth.

2. The carrier-bearer E, with its recesses, abutments, and rim, for holding and carrying the bobbin-carriers *c*, in combination with said bobbin-carriers, and with mechanism for supporting and revolving the said carrier-bearer, arranged and operating substantially as set forth.

3. The grooved ring L, and mechanism for revolving the same in an opposite direction to the carrier-bearer, in combination with said carrier-bearer, substantially as described.

4. The stationary guide-arms M, constructed and arranged as described, and means for supporting the same, in combination with devices for supplying a set of braiding-threads, and with thread-carrying guides or push-prongs *d*, and mechanism for supporting and moving the same, whereby the position and course of the lower threads are regulated and directed, the whole being constructed, arranged, and operating substantially as set forth.

5. The bobbin-carriers *c*, provided with a vertical edge, *u*, shield *y*, a tension-spring, *v*, and stopper-rod *w*, substantially as and for the purpose described.

6. The combination of the upright rod K, having projections *o* and *s*, and cam Y, the rod X, and belt-shifting mechanism, with the drop-pers *p*, bolt *r*, a frame carrying said droppers and bolt, and adapted to supply one set of braiding-threads, a carrier adapted to supply a second set of braiding-threads, means for rotating said frame and carrier in opposite directions and crossing the threads, and means for elevating said bolt on the breakage of one of the upper threads carried by said carrier, substantially as described.

7. The tension-springs N, constructed and arranged as described, in combination with the stationary horizontal guide-arms M and means for supporting the same, mechanism for impelling the thread along the guide-arms, and a revolving frame adapted to hold a set of lower bobbins and supply a set of braiding-threads, substantially as and for the purpose set forth.

In witness whereof we have signed our names to this specification.

FLORENCE L. VEERKAMP.
CHARLES F. LEOPOLD.
WM. DARKER.

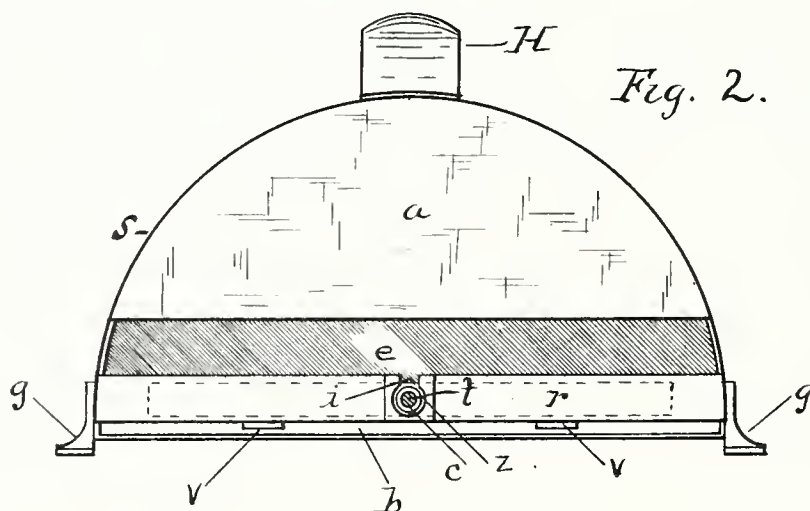
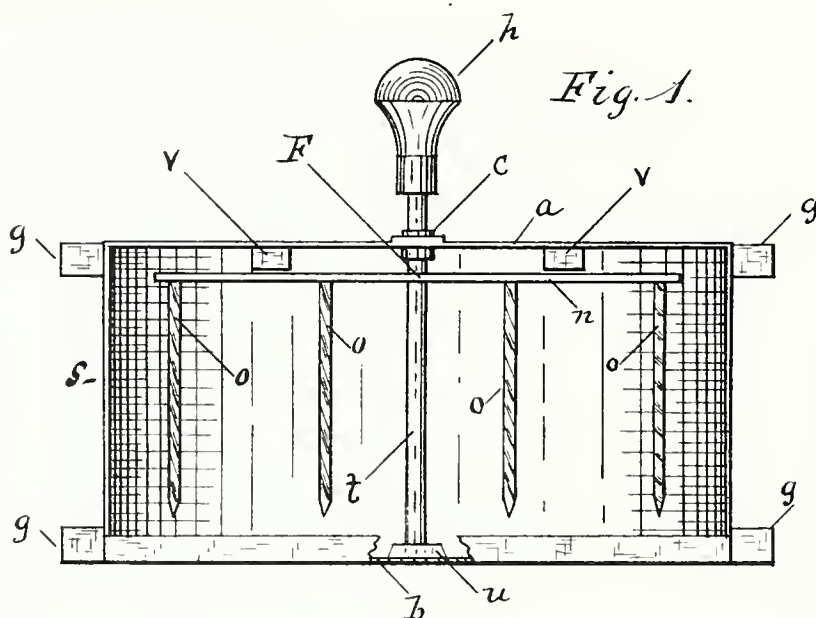
Witnesses:

C. S. PATTERSON,
W. H. BENEDICT.

(No Model.)

M. S. GIBSON.

APPARATUS FOR TOASTING BREAD AND BROILING MEATS, &c.
No. 281,683. Patented July 24, 1883.



WITNESSES:

M. J. Peale
C. F. Ruff

Margaret S. Gibson INVENTOR

ATTORNEY

UNITED STATES PATENT OFFICE.

MARGARET S. GIBSON, OF PHILADELPHIA, PENNSYLVANIA.

APPARATUS FOR TOASTING BREAD AND BROILING MEATS, &c.

SPECIFICATION forming part of Letters Patent No. 281,683, dated July 24, 1882.

Application filed April 21, 1883. (No model.)

To all whom it may concern:

Be it known that I, MARGARET S. GIBSON, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have
5 invented a new and useful Apparatus for Toasting Bread and Broiling Meats, &c., of which the following is a specification, in which reference is had to the accompanying drawings.

10 My apparatus consists of a semi-cylindrical metal case, with its face on the diameter open, containing a multi-barbed pivoted fork, supported in the case in suitable bearings in front of the open case, and having a handle project-
15 ing from the case, by which it may be revolved, and also arranged so that it may be readily removed from the case at will.

An embodiment of my invention is illustrated in the drawings, of which Figure 1 is a
20 front view, showing the open face and the pivoted fork in position; and Fig. 2, a top view of Fig. 1, with the handle of the fork removed.

The case of the apparatus consists of a semi-cylindrical shell, *s s*, closed above by a plate,
25 *a*, and below by a plate, *b*, the front of the shell being open. A passage, *e*, through the top of the case, extending from side to side parallel and near to the front of the case, permits the introduction of the multi-barbed fork
30 *F*, hereinafter to be described, into the case, and of its withdrawal from the same. The strip of metal *v*, which forms the portion of the top of the case included between the passage *e* and the front, is pierced by a hole, *z*, at a point
35 equidistant from the sides of the case, which communicates with the passage *e* by a slot, *i*, less wide than the diameter of *z*. Directly below the hole *z*, on the bottom plate, *b*, is a step, *u*, in which and in the hole or bearing *z*
40 in the strip *v* the shaft of the fork is to be supported, as presently to be described. The case has four feet, *g*, projecting in front of its open face, upon which it may stand when set over an opening in the top of a range or stove.
45 At the back it also has a handle, *H*, by which it may be moved or lifted.

The fork *F* consists of a central shaft, *f*, bearing a cross-bar, *n*, extending on each side of the shaft to a distance something less than
50 the radius of the semi-cylindrical case, from which project a number of barbs, *o*, parallel to the shaft, and ranged equally on each

side of it. To the upper extremity of the shaft *f* is affixed the handle *h*. Between this handle and the cross-bar *n* the shaft is of an enlarged diameter for a short section, *c*, the
55 diameter of the section being slightly less than that of the bearing *z*, but greater than the width of the slot *i*, the remainder of the shaft having a diameter less than the width
60 of the slot. The length of the shaft *f*, from its lower extremity to the enlarged section *c*, is such that when the former is resting in the socket in the step *u* the latter may be supported in the bearing *z* in the strip *v*.
65

The method of using this apparatus for toasting bread or broiling meats is as follows: The fork having been removed from the case, the slices of bread or of meat are fixed on the
70 barbs of the fork with their faces parallel to the cross-bar *n*. The fork and its load, held vertically, are then lowered into the case through the opening *e* until the portion of the shaft *f* between the cross-bar *n* and the thicker section, *c*, is opposite to the slot *i*, leading to the
75 bearing *z*, through which the shaft is then slipped into the bearing *z*, and lowered until its lower extremity rests in the step *u* and the section *c* in the bearing *z*, from which the latter cannot escape, for the reason that it is of
80 a greater diameter than the width of the slot *i*. The fork and its load of bread or meat having thus been placed in position in the case, the latter is set before the grate of a range with
85 its face toward the grate, or else over an opening in the top of the range with its open face down, and one side of the bread or meat is exposed to the heat of the fire until sufficiently
90 done, and then the case is drawn back, or lifted a little by its handle *H*, and the fork turned one-half of a revolution, to bring the other side of the bread or meat toward the fire, which is in its turn subjected to the action of
95 the heat until properly toasted or broiled, as the case may be. The fork is then raised from its bearings, and removed from the case through the opening *e*.

When this utensil is used over an opening in the top of a range or stove, the position of the fork is horizontal, and unless it is loaded
100 equally on each side of the shaft, it will tend to revolve and assume a vertical position. This is prevented, however, by the aid of the two rests *r r*, which project downward from the

front edge of the strip *r* very nearly to the level of the cross-bar *n*, and upon which the fork, when used in a horizontal position, is made to rest by pulling it out until the cross-bar *n* is above the rests, but not sufficiently to withdraw the shaft entirely from its bearing in the step *u*. When it is desired to revolve the fork one-half of a revolution, it is only necessary to push the fork in again, after which it may be revolved.

In order to catch the drippings from meat when broiled with the fork in a vertical position, as when the apparatus is set before the open grate of the range, the bottom plate, *b*, of the case is extended far enough to the front to insure the catching of all the drippings, and its projecting edges turned up.

The following modifications may be made in the construction of the apparatus shown in the drawings without departing from my invention, viz:

First, the cross-bar *n* may be placed on the shaft near its lower extremity, with the barbs pointing upward, instead of vice versa, as in the drawings. In this case, when the fork is in position in the case, the cross-bar *n* would be near the bottom plate, with the barbs projecting upward toward the top plate of the case, and the two rests *r r* would be attached to the bottom of the case, instead of to the top, and project upward sufficiently far for the cross-bar of the fork to rest upon. When the shaft of the latter is pushed home into the bearing in the step *u*, to be able to revolve the fork, pull it out until the cross-bar is disengaged from the rests *r*.

Second, the top plate of the case may be made without the passage *e* in it, in which case the slot *i* of the bearing *z* would have to open toward the front of the case, and the rests *r* be located just back of the fork, instead of in front of it, and the fork would be removed from the case through its open face, instead of through the passage *e*.

Third, the apparatus may be modified by extending the sides, top, and bottom of the case far enough to the front of the fork, so that when the case is set upon the top of a stove the fork may be revolved without first lifting the case.

Among the advantages possessed by this utensil over those ordinarily used for the same purposes are, first, that owing to the retention of the heat by the case, and its reflection back by the same upon the side of the bread or meat turned away from the fire, the latter is heated and kept warm, and the process of cooking hastened; and, second, that when used over an opening in the top of a stove or range the broiled meats are likely to be less impregnated with the gases from the burning fuel, for the reason that the casing by which the fork and its meat are covered prevents any current of the gases through and around the meat.

Thus having described my invention, I claim as mine and wish to secure to myself by Letters Patent of the United States—

1. In a utensil for toasting bread and broiling meat, a case having one face open, in combination with a multi-barbed fork, supported in the interior of the case in front of its open face by a central shaft forming a portion of the fork and resting in suitable bearings in opposite walls of the case, one extremity of the said shaft protruding from the case and bearing a suitable handle, by which the shaft and fork may be revolved, all substantially as and for the purpose specified.

2. In a utensil for toasting bread and broiling meat, the combination of a case having one face open, the multi-barbed fork *F*, having a shaft, *f*, with the enlarged section or arbor *c*, the bearing *z*, with the passage *i*, smaller than the bearing and than the arbor *c* on the shaft *f*, and the step *u*, the combination operating substantially as and for the purpose specified.

3. In a utensil for toasting bread and broiling meats, a semicircular case, with its face on the diameter open, having the passage *e* through its upper side, the bearing *z*, with its slot *i*, the step *u*, and the rests *r r*, in combination with the multi-barbed fork *F*, the combination operating substantially as and for the purpose specified.

MARGARET S. GIBSON.

Witnesses:

M. GIBSON.

S. MORRIS LILLIE.

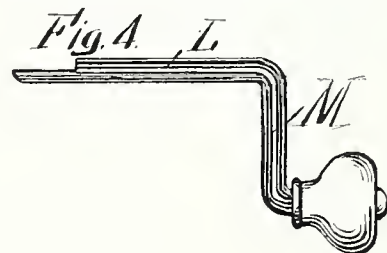
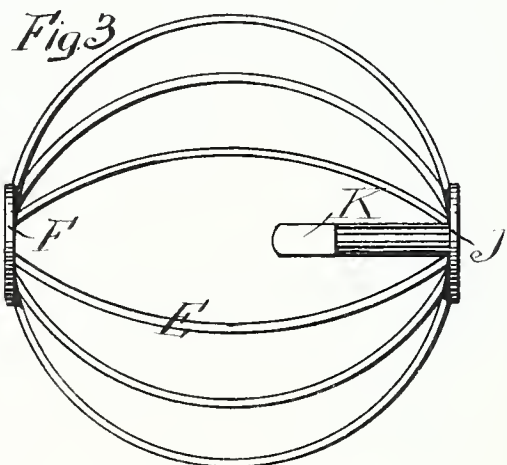
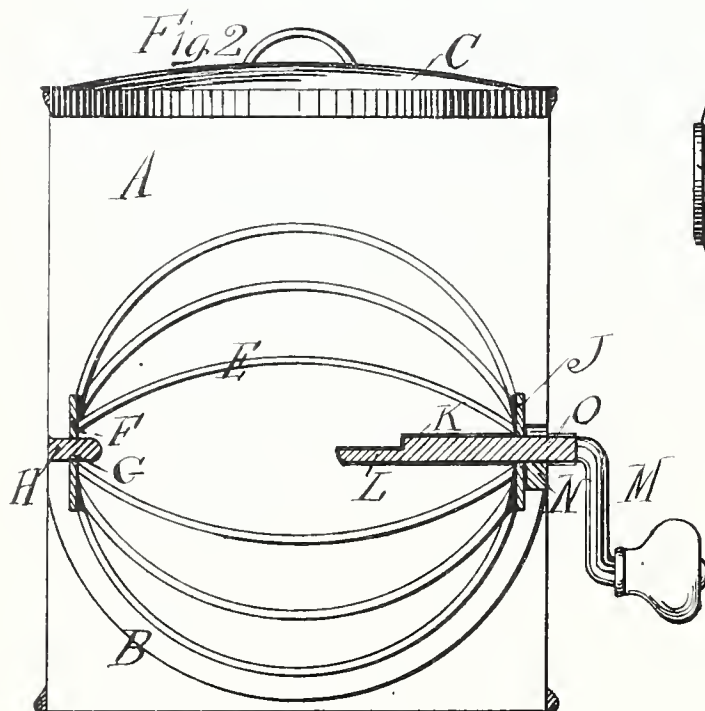
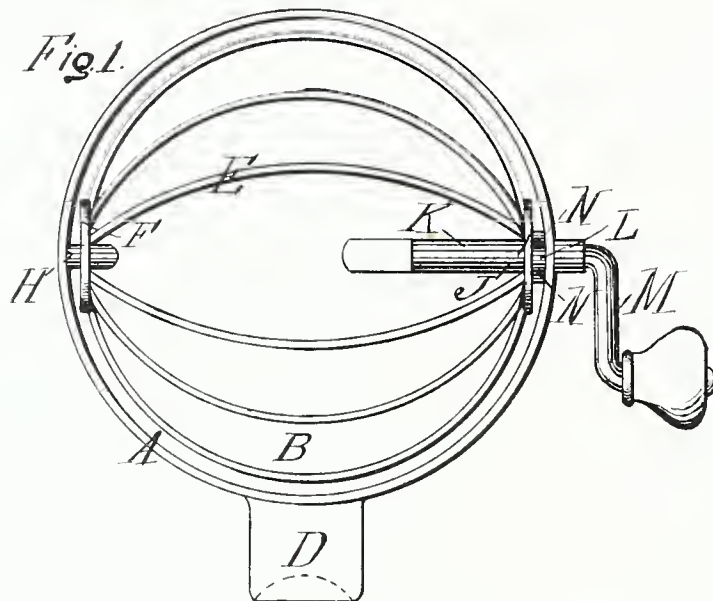
(No Model.)

K. A. LIVINGOOD.

EGG BEATER.

No. 282,738.

Patented Aug. 7, 1883.



WITNESSES:

WITNESSES:
Linn Wheeler
J. Daniel Eby

INVENTOR

Katherine A. Livingston.
by her atty
J. H. Livingston.

UNITED STATES PATENT OFFICE.

KATHERINE A. LIVINGOOD, OF WOMELSDORF, PENNSYLVANIA.

EGG-BEATER.

SPECIFICATION forming part of Letters Patent No. 282,738, dated August 7, 1883.

Application filed June 5, 1883. (No model.)

To all whom it may concern:

Be it known that I, KATHERINE A. LIVINGOOD, a citizen of the United States, residing in the borough of Womelsdorf, in the county of Berks and State of Pennsylvania, have invented a new and useful Implement for Beating Eggs for Culinary Purposes; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable others skilled in the art to make and use the said invention.

This invention has for its object the quick beating of eggs with small labor and the avoidance of splashing during the operation, and at the same time to use an apparatus easily cleaned in all its parts, and of such simple construction as to be easily understood by persons of ordinary intelligence.

To effect these results the nature of this invention may be briefly stated to consist of a reel of wire arranged to rotate in a cylindrical vessel having a hemispherical bottom in close proximity to the reel, and a crank-handle extending through the side of the vessel by which the reel is rotated, the construction of the reel and its shaft, and the bearings or supports thereof, being such as to permit of the reel being withdrawn and replaced with facility. A lid is fitted to the top of the vessel so as to prevent splashing.

I will now proceed to particularly describe the mode of making and using the said invention, referring in so doing to the drawings annexed and the letters of reference marked thereon.

Figure 1 shows a plan of the implement with the cover removed; Fig. 2, a vertical section; Fig. 3, the reel, and Fig. 4 the crank as detached.

The same letters of reference apply to the same parts in the several figures.

A represents a cylindrical vessel having a hemispherical bottom, B, and provided with a removable lid, C, and also a handle, D.

E represents a spherical reel made of wires, of such dimensions as to fit snugly, but without contact with, the bottom B.

F is a hub of the reel E, having a circular hole, G, in it, which fits over a pin or pivot, H, fastened to the inside of the vessel, so as to coincide with the greater diameter of the hemispherical bottom B.

J is another hub of the reel E, having a tube or sleeve, K, of such form as to fit over the axle L of the crank M, and to be turned thereby.

N is a bearing fastened in the same plane in the vessel A as the pivot H, but diametrically opposite, and holds the end of the tube K.

An opening, O, is made in the side of the vessel A, so as to permit the crank-axle L to be introduced.

The axle L is made flat in one portion, as is also the tube or sleeve K, so as to cause the reel to turn with the crank M.

To use the apparatus the eggs are broken and placed in the vessel A and the cover or lid C placed on it and the crank M rapidly turned, and the eggs are quickly whipped to the desired consistence and then removed.

To cleanse the apparatus the crank M and shaft or axle L are withdrawn from the tube K in the reel E, when the reel will drop out as soon as the vessel A is inverted, and all parts are thus easily cleansed.

Having described my invention and the mode of using the same, what I claim is—

The combination of the vessel A and reel E with the removable crank M, bearing N, and pivot H, all constructed and arranged substantially as set forth.

KATHERINE A. LIVINGOOD.

Witnesses:

WM. H. LIVINGOOD,
H. A. ZIEBER,
GEORGE J. GROSS, Jr.

UNITED STATES PATENT OFFICE.

CARRIE R. LAMAN, OF MEADVILLE, PENNSYLVANIA.

LUBRICATING-OIL.

SPECIFICATION forming part of Letters Patent No. 282,648, dated August 7, 1883.

Application filed August 18, 1882. (No specimens.)

To all whom it may concern:

Be it known that I, CARRIE R. LAMAN, of Meadville, Crawford county, Pennsylvania, have invented a new and useful Improvement
5 in Lubricating-Oil; and I do declare that the following is a full and exact description thereof, reference being had to the composition as a whole, and also to each of the marked ingredients.

10 The lubricating-oil is formed by mixing petroleum, either raw or refined, with any of the other natural lubricants, (as sperm, lard, or tallow, &c.,) paraffine, rosin, beeswax, lime, and salt, to which is added an alkali to clarify and
15 hold the mixture in solution.

To prepare the lubricating-oil, take one gallon of petroleum, either raw or refined, one-half pound of lard, or whichever of the natural lubricants preferred, one-half pound rosin,
20 one-half pound paraffine, and two ounces of beeswax. Place in a suitable vessel over a slow fire. Unite at a low heat. When thoroughly mixed, add one pint lime-water and one-half pound of salt. Stir well. Then add
25 one ounce alkali, as potash, carbonate of soda, sal-soda, or any other convenient alkali. Stir and skim until it is clarified. Then drain the mixture from the impurities that have settled.

The oil may be made lighter or heavier, as desired, according to the amount of solids 30 used—beeswax, paraffine, and rosin. In the cheaper grades of oil the beeswax may be withheld. The quantity of separate materials is not restricted to a particular amount, sufficient being used to produce the desired consistency and purity. 35

I am aware that petroleum-oil, tallow, beeswax, soda, and salt, that lime, paraffine, and rosin, that tallow, paraffine, neat's-foot oil, 40 castor-oil, and potash, and that petroleum, animal fat, and lime-water have all been used in the combinations stated to form a lubricating compound; but I am not aware that the compound composed of the elements described in the foregoing specification has ever been used. 45

What I claim as my invention is—

A lubricating-oil composed of petroleum, lard, or tallow, paraffine, rosin, beeswax, lime, salt, and an alkali, compounded in substantially the proportions stated, for the purpose set forth.

C. R. LAMAN.

Witnesses:

C. BELLE LAMAN,
HELEN A. MILLIMAN.

(No Model.)

M. HOLDEN.

FLOWER POT.

No. 289,102.

Patented Nov. 27, 1883.

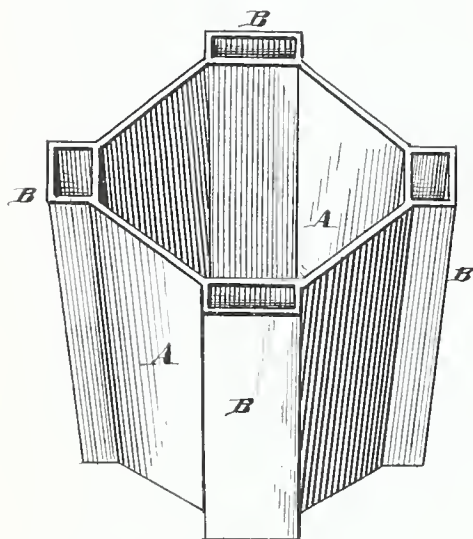


Fig. 1

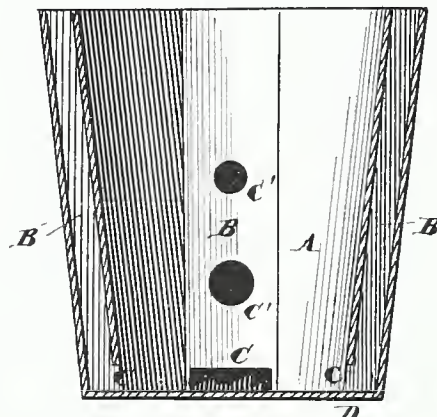


Fig. 2

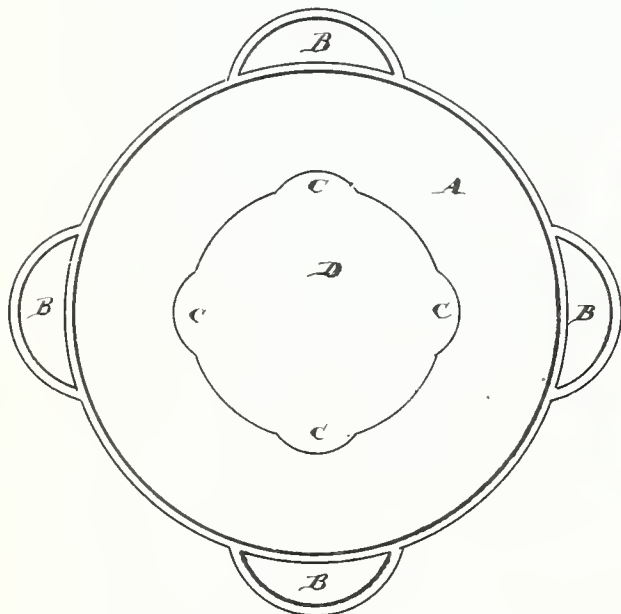


Fig. 4

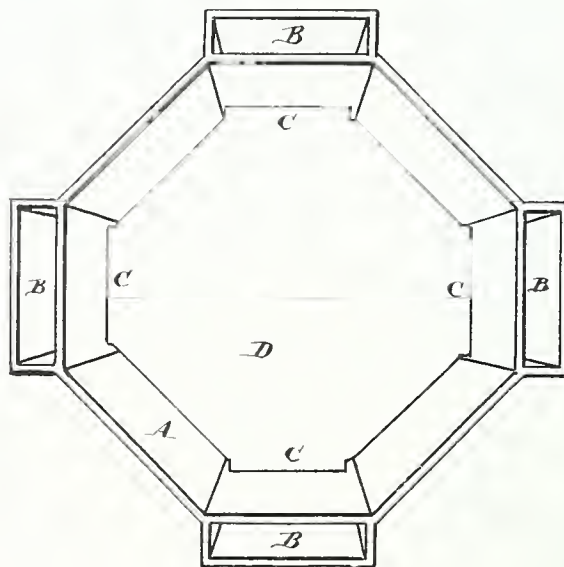


Fig. 3

Attest
Charles H. James
Frank Cram

Inventor
Abagail Holden

UNITED STATES PATENT OFFICE.

MAGDALENE HOLDEN, OF PHILADELPHIA, PENNSYLVANIA.

FLOWER-POT.

SPECIFICATION forming part of Letters Patent No. 289,102, dated November 27, 1883.

Application filed June 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, MAGDALENE HOLDEN, of the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Flower-Pots, of which the following is a specification.

My invention has reference to flower-pots; and it consists in forming the same with a closed bottom, and one or more receptacles or passages formed upon the same, extending from the top to the bottom, where they open into the interior of a flower-pot, and in details of construction, fully set forth in the following specification, and shown in the accompanying drawings, which form part thereof.

I form a flower-pot with passages for conducting the water from the top to the bottom of the pot, offset upon the exterior thereof. Heretofore such passages have been formed on the inside of the pot, or by an annular opening surrounding the entire pot. I lay no claim to such forms.

In the drawings, Figure 1 is a perspective view of the flower-pot embodying my invention. Fig. 2 is a sectional view of same on line *x x*. Fig. 3 is a plan view of same. Fig. 4 is a plan view of same modified in its configuration.

A is the body of the flower-pot, and may be square, rectangular, hexagonal, octagonal, elliptical, or round, and is provided with a

solid bottom, D. In elevation the pot may be tapering or prismatical. The body is provided with one or more offset passage-ways or receptacles, B, which are open at the top, and connect with the interior of the pot, at or near the bottom, by passages or apertures C. If desired, additional apertures C' may be made in the walls of the pot, to open into the passages B at various heights.

I do not limit myself to any particular shape or ornamentation of my improved flower-pot. Neither do I limit myself to any particular substance from which it shall be made, but I prefer, on account of cheapness, the usual terra-cotta. It may be made, however, of sheet metal.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A flower-pot having a plane interior, and offset passages or receptacles formed on the exterior thereof, extending from the top to the bottom of the pot, and provided with apertures connecting the receptacles with the interior of the pot, substantially as set forth.

In testimony of which invention I hereunto set my hand.

MAGDALENE HOLDEN.

Witnesses:

CHARLES R. HARRIS,
FRANK CRAVEN.

(No Model.)

E. M. DOWNING.

DRESS PROTECTOR.

No. 293,722.

Patented Feb. 19, 1884.

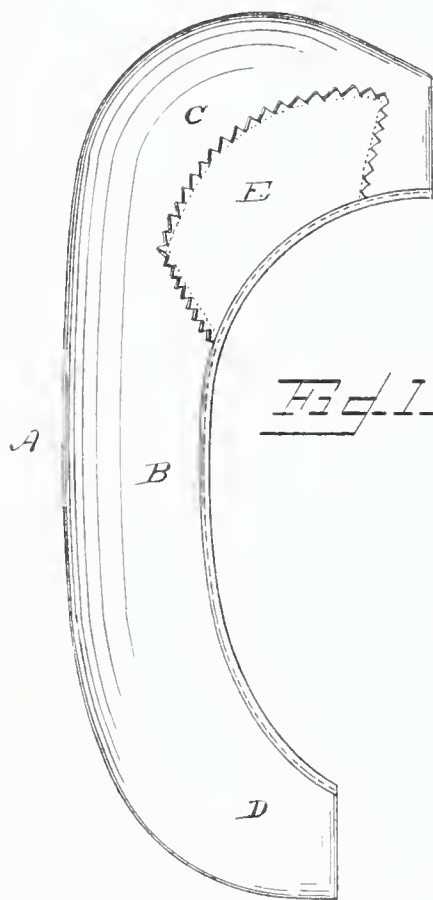


Fig. 1.

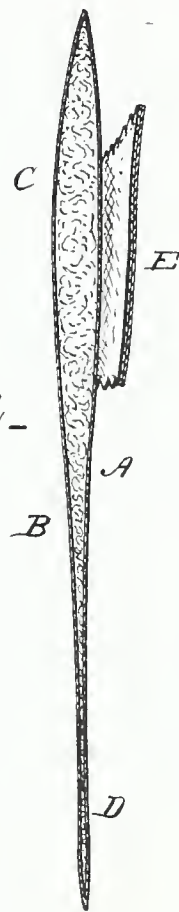
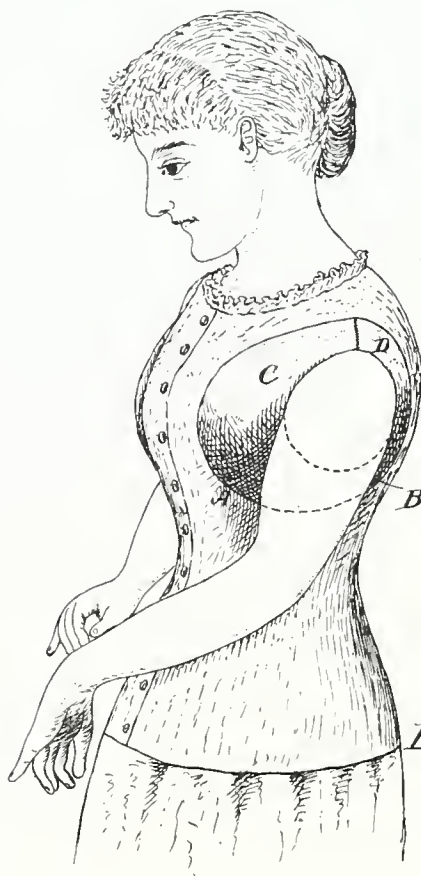


Fig. 2.

Fig. 3.



WITNESSES

F. L. Ourand
E. G. Siggers.

INVENTOR

Elizabeth M. Downing.

by *C. A. Snow & Co.*

Attorneys

UNITED STATES PATENT OFFICE.

ELIZABETH M. DOWNING, OF GRANT CITY, PENNSYLVANIA.

DRESS-PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 293,722, dated February 19, 1884.

Application filed November 7, 1883. (No model.)

To all whom it may concern:

Be it known that I, ELIZABETH M. DOWNING, a citizen of the United States, residing at Grant City, in the county of Lawrence and State of Pennsylvania, have invented a new and useful Dress-Protector, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to dress-protectors; and it has for its object to provide a device which shall serve the double purpose of preventing the dress to which it is applied from being discolored by perspiration under the sleeves and of giving fullness to the bust. To this end it consists in the improved construction of the said device, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a perspective view of my improved dress-protector. Fig. 2 is a transverse sectional view on the line *xx* of Fig. 1; and Fig. 3 is a view of part of a dress waist and sleeve, showing the device in position.

The same letters refer to the same parts in all the figures.

In the drawings hereto annexed, A designates the body of my improved dress-protector, which consists of a easing made of muslin, drilling, or other suitable material of the shape shown in the drawings, by reference to which it will be seen that it consists, essentially, of a straight central portion, B, having upwardly-curved front and rear ends, C D, the former of which is made of greater width than the rear end, and curved so as to conform to the shape of the bust. This ease is stuffed with cotton-batting, sheet-wadding, or other suitable material, which is so distributed as to give the greatest fullness in the front end or bust portion, C, from whence it gradually decreases toward the center of the ease.

To the inner edge of the bust portion C is stitched a flap, E, of soft-rubber cloth, oiled silk, or other suitable material impermeable to moisture, and lined with drilling, muslin, or the like. This flap, which is adapted to fit under the sleeve, serves to prevent the perspiration from penetrating and discoloring the dress.

The application and operation of my invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed.

The inner edge of the front or bust portion, C, is arranged and attached under the sleeve, the portion C extending forwardly under the bust portion of the dress. The main portion A extends rearwardly under the sleeve and back of the arm, and the portion D extends over the shoulder until it meets the front edge of the portion C. By this construction the fullness gradually increases from under the arm forwardly over the bust, thus forming a graceful outline, which, by appliances heretofore in use, it has been difficult or impossible to produce. The flap E thoroughly protects the dress from the discoloring effects of perspiration.

The device is simple, inexpensive, and easily applied.

I claim as my invention and desire to secure by Letters Patent of the United States—

1. As an improved article of manufacture, the combined dress pad and protector, consisting of a wadded ease comprising a straight central portion and upwardly-curved front and rear ends, substantially as described, in combination with an impervious flap secured to the inner edge of the front portion, as and for the purpose set forth.

2. The combination, with a dress-waist, of the herein-described improved pad and protector, the same consisting of a wadded ease comprising a straight central portion and upwardly-curved front and rear ends, and an impervious flap secured to the inner edge of the front end, said pad or protector being secured in the said dress-waist under and around the sleeve, as herein described, for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ELIZABETH M. DOWNING.

Witnesses:

JAMES STORY,

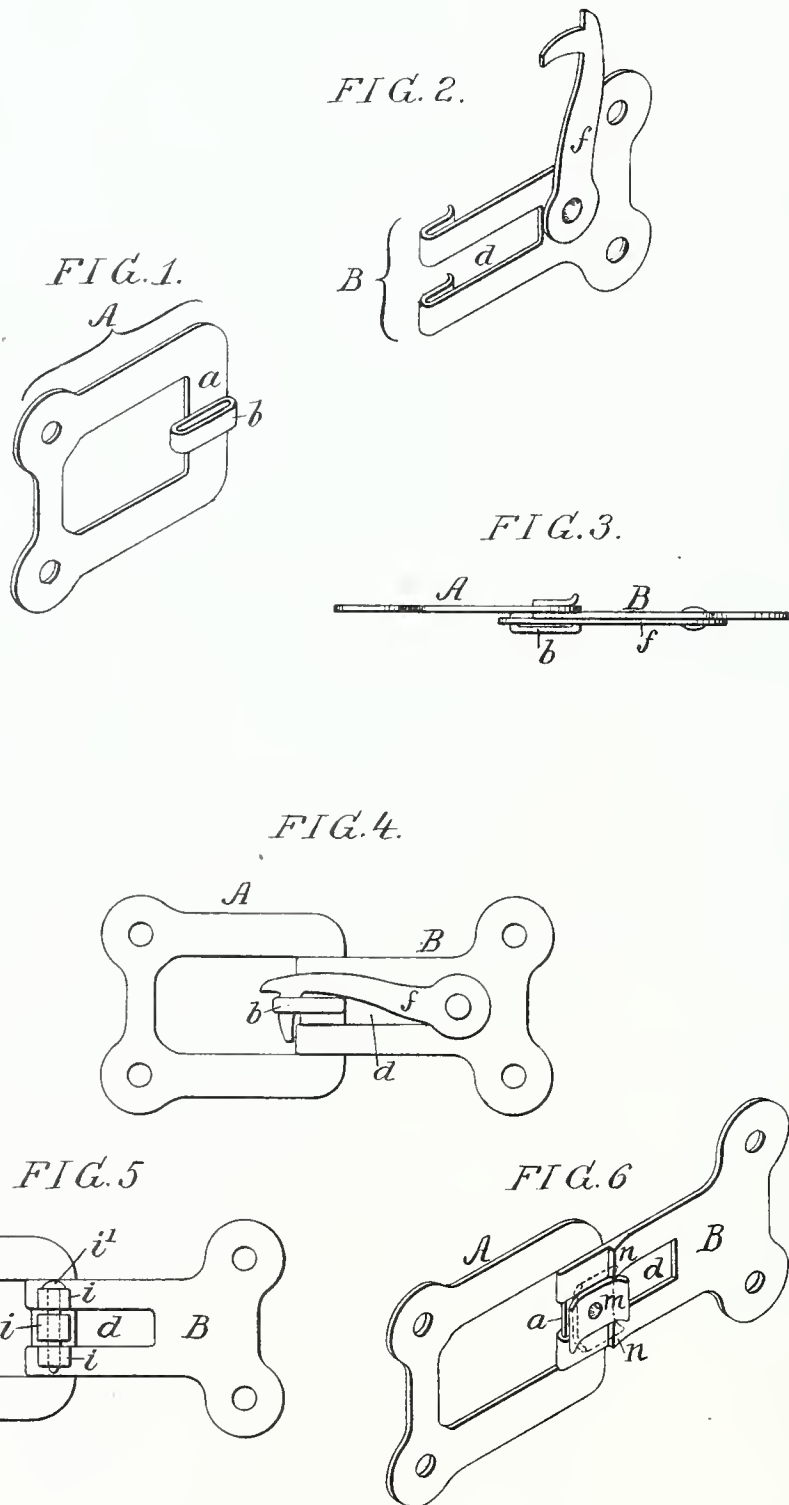
J. A. ARTERHOLT.

(No Model.)

F. G. WHELAN.
HOOK AND EYE FASTENING.

No. 294,554.

Patented Mar. 4, 1884.



WITNESSES:
Harry Drury
James F. Jobny

INVENTOR:
Frances G. Whelan
by her Attorneys
Hawson & Sons

UNITED STATES PATENT OFFICE.

FRANCES G. WHELAN, OF PHILADELPHIA, PENNSYLVANIA.

HOOK-AND-EYE FASTENING.

SPECIFICATION forming part of Letters Patent No. 294,554, dated March 4, 1884.

Application filed October 15, 1883. (No model.)

To all whom it may concern:

Be it known that I, FRANCES G. WHELAN, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Hook-and-Eye Fastenings, of which the following is a specification.

The object of my invention is to prevent the accidental release of the hook from the eye after they have been coupled, and this object I attain by combining with said hook and eye a retaining device of a character fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a perspective view of the eye, and Fig. 2 a similar view of the hook of the fastening, provided with a retainer forming the subject of my invention, Fig. 3 being a plan view, and Fig. 4 a perspective view, showing the hook and eye adapted to each other and held in position by the retainer; and Figs. 5 and 6, views showing modified forms of retainers.

In Figs. 1 to 4, A represents the eye, and B the hook, of the fastening, these parts being adapted to interlock, as usual, and being of any desired size or shape, and constructed for being sewed or otherwise attached to a garment. On the end bar, *a*, of the eye A is a central loop, *b*, and in the hook B is a central recess, *d*, through which the loop *b* projects when the hook and eye are interlocked, as shown in Figs. 3 and 4. Pivoted to the hook B is a hook, *f*, of such a character that when the parts are thus interlocked it may be adapted to the loop *b*, thereby effectually pre-

venting the release of the hook B from the eye A, as any longitudinal movement of one independent of the other is impossible.

While I prefer this form of retainer, the use of a loop and hook is not absolutely necessary to the carrying out of my invention. For instance, the hook and eye may have coinciding loops *i*, adapted for the reception of a retaining-pin, *i'*, as shown in Fig. 5; or a turn-buckle, *m*, hung to the end bar of the eye A, as shown in Fig. 6, may be used, if desired, the hook in the latter case being furnished with shoulders *n*, against which the turn-buckle can bear, and said turn-buckle having sufficient elasticity to pass these shoulders in being turned from the position shown in full lines to that shown in dotted lines.

I claim as my invention—

1. The combination of the eye A of the fastening, the hook B, adapted to engage with the end bar, *a*, of the eye, and having a longitudinal opening, *d*, and a retaining device, substantially as described, part of which is carried by the bar *a*, and is adapted to the recess *d* of the hook, as set forth.

2. The combination of the eye A, having a loop, *b*, with the hook B, having a central recess, *d*, and pivoted hook *f*, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANCES G. WHELAN.

Witnesses:

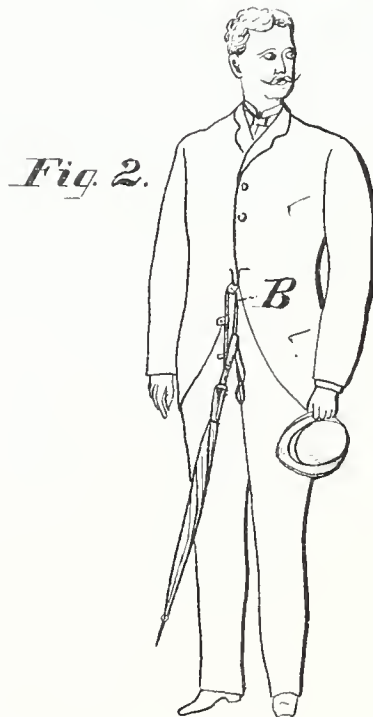
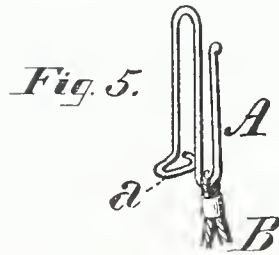
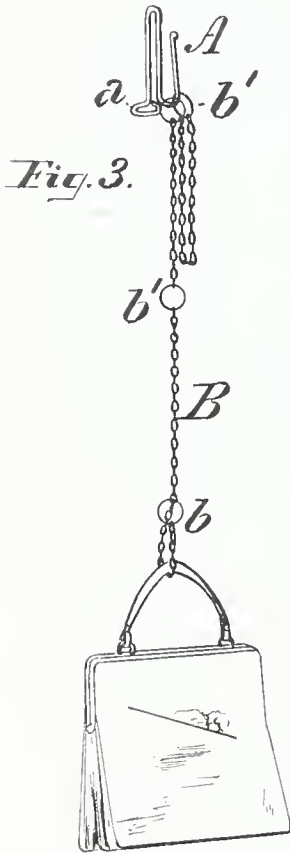
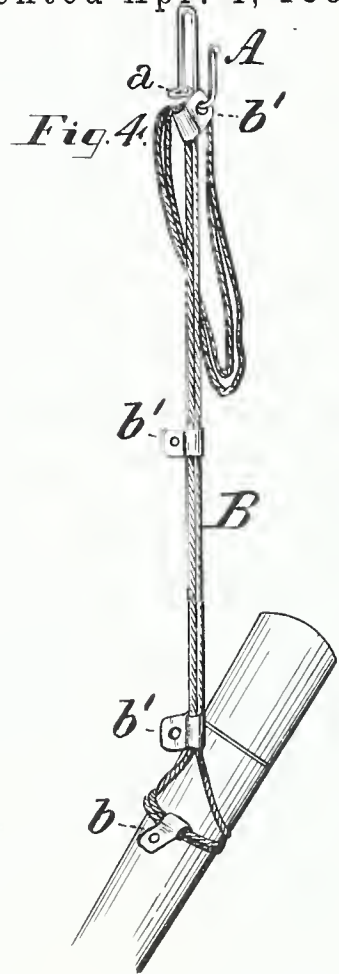
JOHN E. PARKER.
HARRY SMITH.

(No Model.)

E. G. HARLEY.
SAFETY ATTACHMENT.

No. 296,002.

Patented Apr. 1, 1884.



WITNESSES:
Geo. B. Lollar.
Wm. E. Morgan.

INVENTOR.
Elizabeth G. Harley,
by J. Thurston Bell,
Atty.

UNITED STATES PATENT OFFICE.

ELIZABETH G. HARLEY, OF PHILADELPHIA, PENNSYLVANIA.

SAFETY ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 296,002, dated April 1, 1884.

Application filed January 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, ELIZABETH G. HARLEY, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Safety Attachments, of which improvements the following is a specification.

The object of my invention is to provide simple, convenient, and effective means for the attachment of an umbrella, satchel, caba, or other small article ordinarily carried in the hand, to a part of the wearing-apparel of the person carrying the same, so as to enable such article to be transported and handled as desired without risk of being dropped or mislaid.

To this end my improvements consist in the combination of a cord or chain and a suspending-hook of special construction; also, in the combination of a cord or chain, a suspending-hook, a connecting-piece, and a series of adjusting-pieces, all as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a view in perspective, illustrating the application of my invention for carrying a lady's caba; Fig. 2, a similar view, showing it as used for carrying an umbrella; Figs. 3 and 4, views on an enlarged scale, showing, respectively, different constructions of the device as proper for the uses shown in Figs. 1 and 2; and Fig. 5, a view of the suspending-hook detached.

My complete device I term the "universal attacher," inasmuch as it is adapted to be used for carrying almost any article of sufficient lightness to be ordinarily carried in the hand. In its construction I provide a suspending-hook, A, of wire, bent into the form shown in the drawings—to wit, having three substantially-parallel limbs forming two bends of U shape, with openings at opposite ends, respectively, of the hook, and having a cross-piece or retainer, *a*, on one of its ends. A cord or chain, B, is connected at one of its ends to the bend of the hook A farthest from the cross-piece *a*, and is provided at its opposite end with a connecting-piece, *b*, through which the cord or chain is passed to form a loop around any convenient point of attachment on the article to be carried. When a chain is employed, the connecting-piece may be a simple ring, as in Fig. 3, and if a cord is

used the connecting-piece is preferably in the form shown in Fig. 4—that is to say, having a tubular portion fitting the cord (which may be single or double) and a lateral eye or ring. One or more adjusting-pieces, *b'*, which may be of similar construction to the connecting-piece *b*, are attached to the cord or chain B at a desired point or points in its length.

In the use of the device, the suspending-hook A is connected to a button hole of a coat, dress, or other outer garment, or to a belt, the transverse piece *a* serving to retain it in position, and the opposite end of the cord or chain is looped around and tightened on the article to be carried by the connecting-piece *b*. By engaging one or another of the adjusting-pieces *b'* with the hook A, the cord or chain may be shortened or lengthened, so that the attached article will be suspended at such convenient height as may be desired, so as to relieve the hands of the person carrying it and obviate risk of its being lost or mislaid.

When not in use, the chain may be left attached to the article, with the adjusting-pieces connected to the hook and looped up or not at pleasure.

I claim as my invention and desire to secure by Letters Patent—

1. A suspending-hook for safety attachments, having two U-shaped bends turned in opposite directions, and a cross-piece or retainer at the end of one of said bends, in combination with a cord or chain provided with means for attachment to said hook and to the article to be carried, substantially as set forth.

2. The combination of a suspending-hook such as described, and a cord or chain connected at one end to said hook, and having a connecting piece, ring, or slide at the other, substantially as set forth.

3. The combination of a suspending-hook such as described, a cord or chain attached thereto, a connecting-piece attached to the opposite end of said cord or chain, and one or more adjusting-pieces attached to the cord or chain between the hook and the connecting-piece, substantially as set forth.

ELIZABETH G. HARLEY.

Witnesses:

MARY H. MULFORD,
SPENCER K. MULFORD.

(No Model.)

J. MÜLLER.

SHOE.

No. 299,934.

Patented June 3, 1884.

Fig. 1.

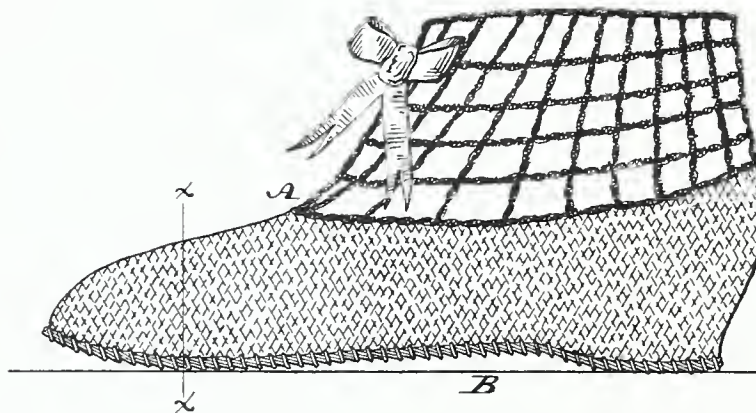


Fig. 2.

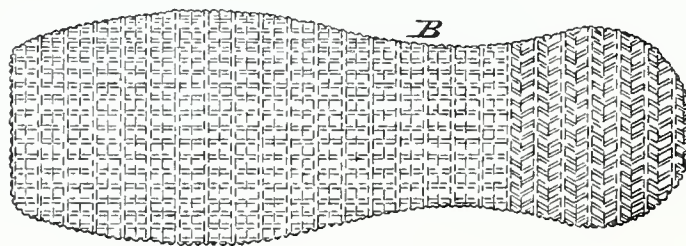
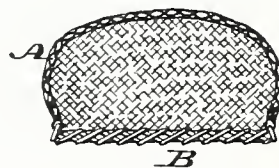


Fig. 3.



WITNESSES:

W. P. Grant,
W. F. Kircher

INVENTOR:

Johanna Müller,
BY *John A. Giedersheim,* ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHANNA MÜLLER, OF PHILADELPHIA, PENNSYLVANIA.

SHOE.

SPECIFICATION forming part of Letters Patent No. 299,934, dated June 3, 1884.

Application filed April 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHANNA MÜLLER, a citizen of Switzerland, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Shoes, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation of a shoe embodying my invention. Fig. 2 is a bottom plan thereof. Fig. 3 is a transverse section in line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a shoe formed of knitted material adapted for bathing and overshoe purposes, as will be hereinafter fully set forth.

Referring to the drawings, A represents the upper of the shoe, and B the sole and heel thereof, both formed of thread or yarn knitted with a crochet-stitch. The yarn or thread for the sole is of a tough and tightly-spun nature, the same being knitted close so as to prevent no openings between the stitches, and cause the sole to be compact, leaving a ribbed or indented surface, as most clearly shown in Fig. 1. The upper may be made of the same yarn; but a softer yarn or thread is preferred, and the thread or yarn at the sides of the upper is knitted to the yarn or thread at the sides of the sole, thus connecting the sole and upper. The heel may be of the same stitch as

the sole or different therefrom, the yarn or thread thereof, however, being similar to that of the sole, so as to present the compactness and ribbed surface thereof.

It will be seen that the shoe, when required, may be readily drawn over the other shoe of the wearer, and, owing to its nature, it keeps the foot warm and dry. The ribbed surface or tread of the sole and heel, being of a frictional nature, causes the shoe to take firm hold of the ground; hence renders the shoe admirably adapted for walking on ice and snow, as it prevents slipping. It is, moreover, of a ventilating nature, and does not draw the foot or cause excessive warmth; hence may be worn with comfort with or without the other shoe, and, as it has a thick and compact sole, it is serviceable for general wearing purposes, it being easy and noiseless.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A shoe having its upper and sole formed of knitted material, the stitches of the upper being united by knitting to those of the sole, substantially as and for the purpose set forth.

2. An improved shoe having a knitted upper and a knitted sole connected therewith, formed with a ribbed surface.

JOHANNA MÜLLER.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. GRANT.

(No Model.)

5 Sheets—Sheet 1.

M. E. BEASLEY & E. M. HUGENTOBLE
BARREL MAKING MACHINE.

No. 300,193.

Patented June 10, 1884.

FIG. 1.

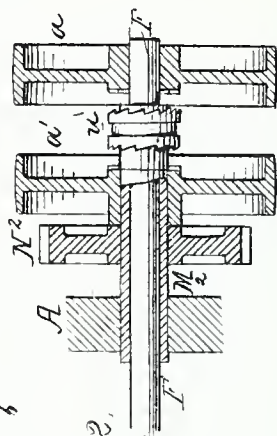
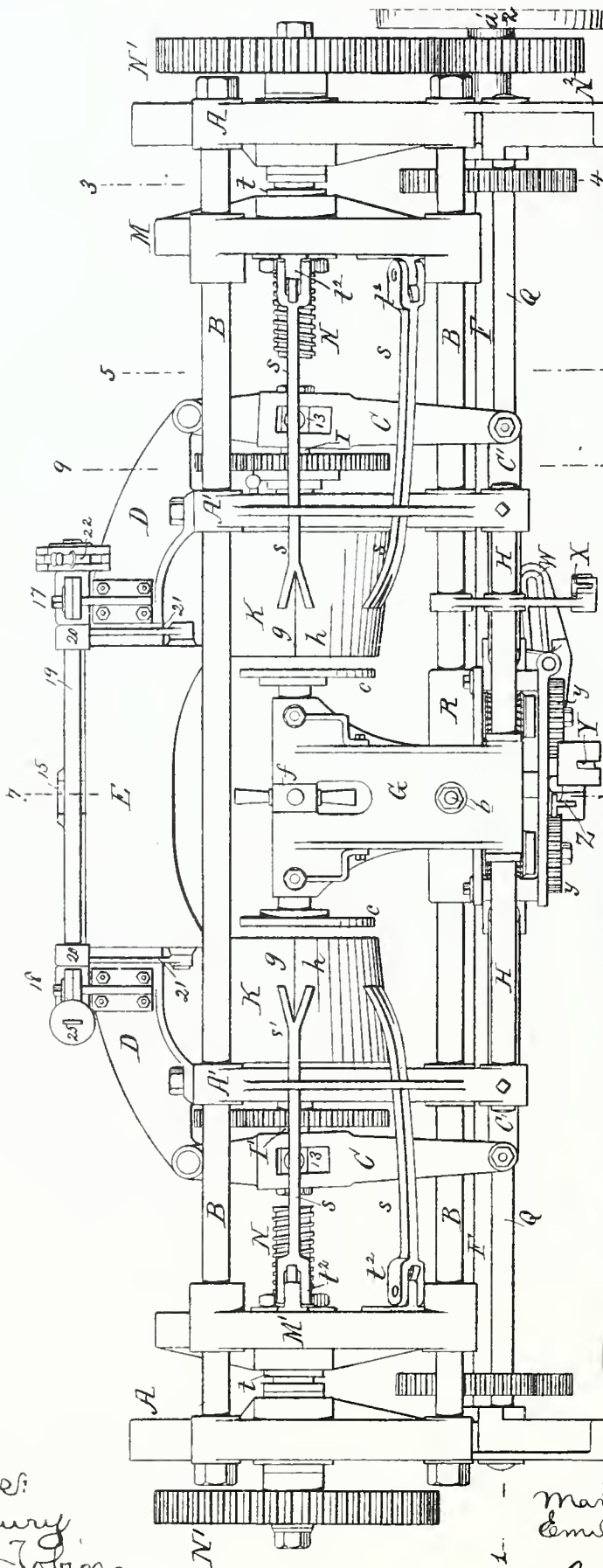


FIG. 2.

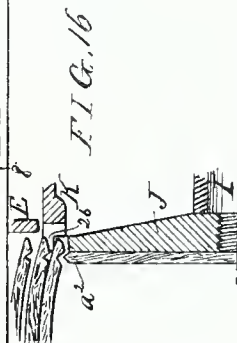


FIG. 16.

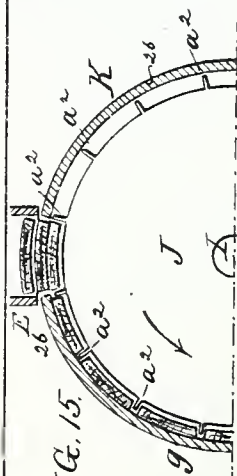


FIG. 15.

Witnesses:
Harry Drury
James J. Tobin

Inventors:
M. E. Beasley
and
E. M. Hugentobler
By their Attys.
H. W. M. & Co.

(No Model.)

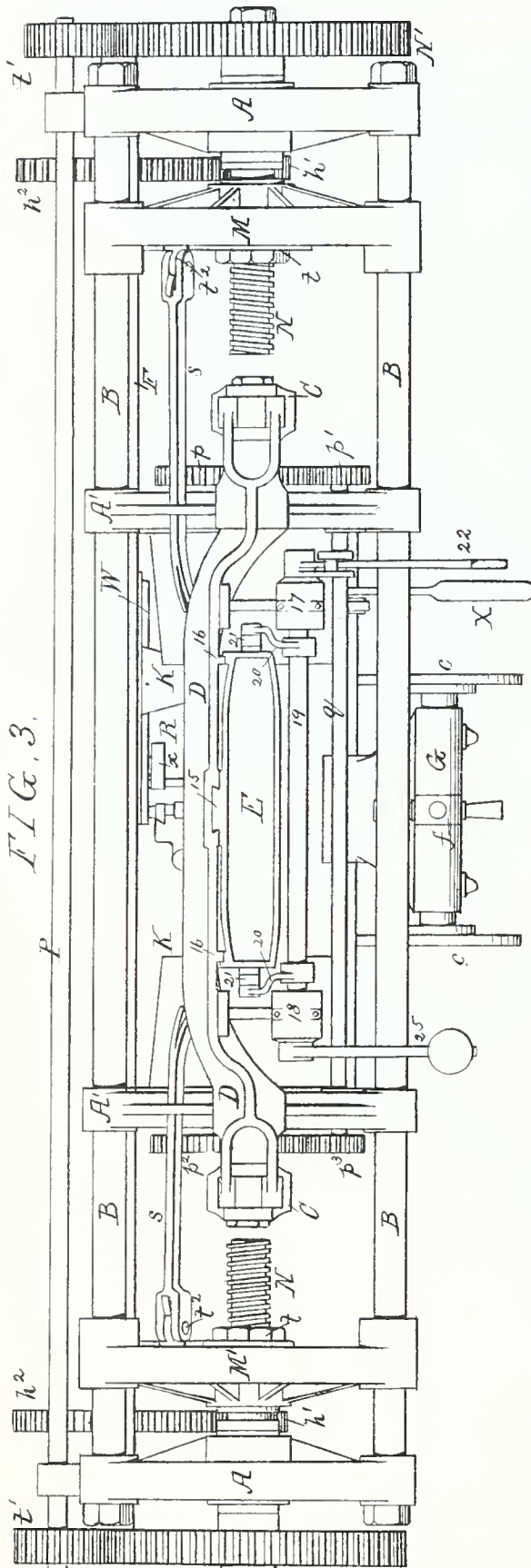
5 Sheets—Sheet 2.

M. E. BEASLEY & E. M. HUGENTOBLE

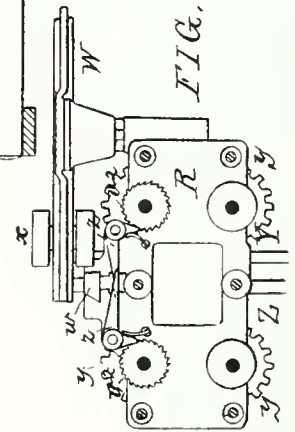
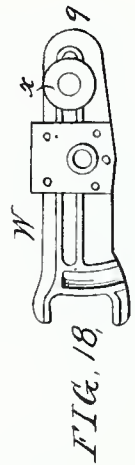
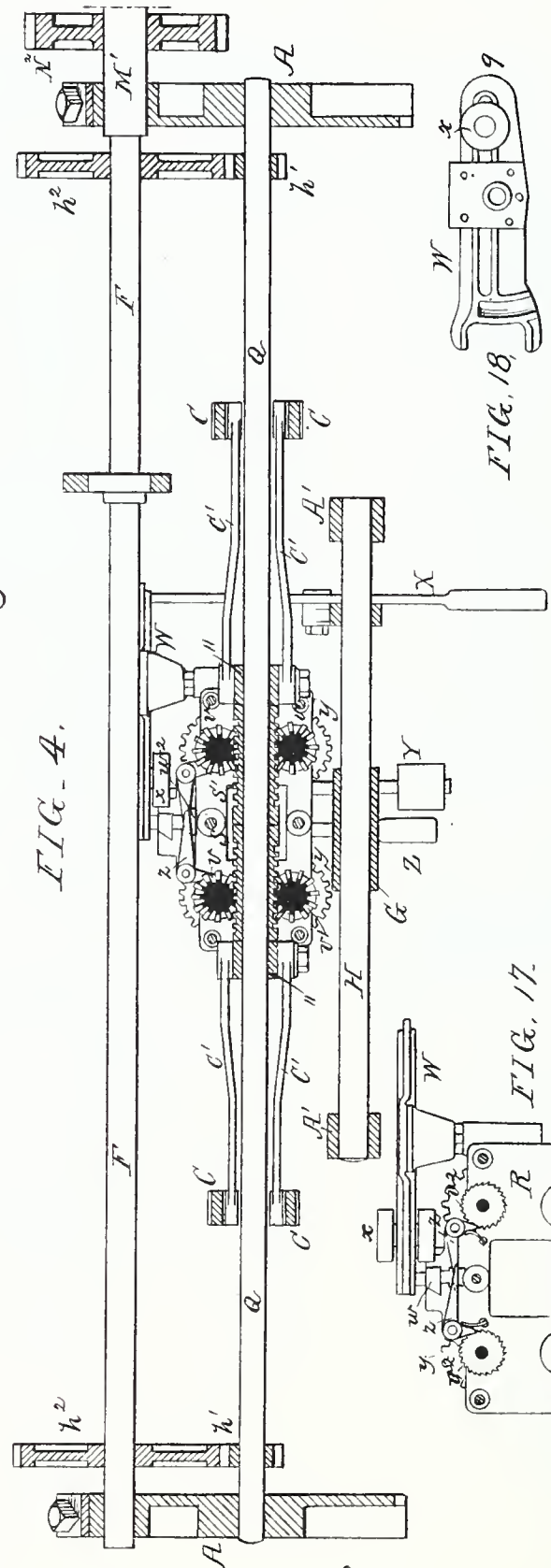
BARREL MAKING MACHINE.

No. 300,193.

Patented June 10, 1884.



Witnesses
Harry Drury
James T. Tobin,



Inventors
Maria E. Beasley
and
Emil M. Hugentobler
by their Attorneys
Howe & Jones

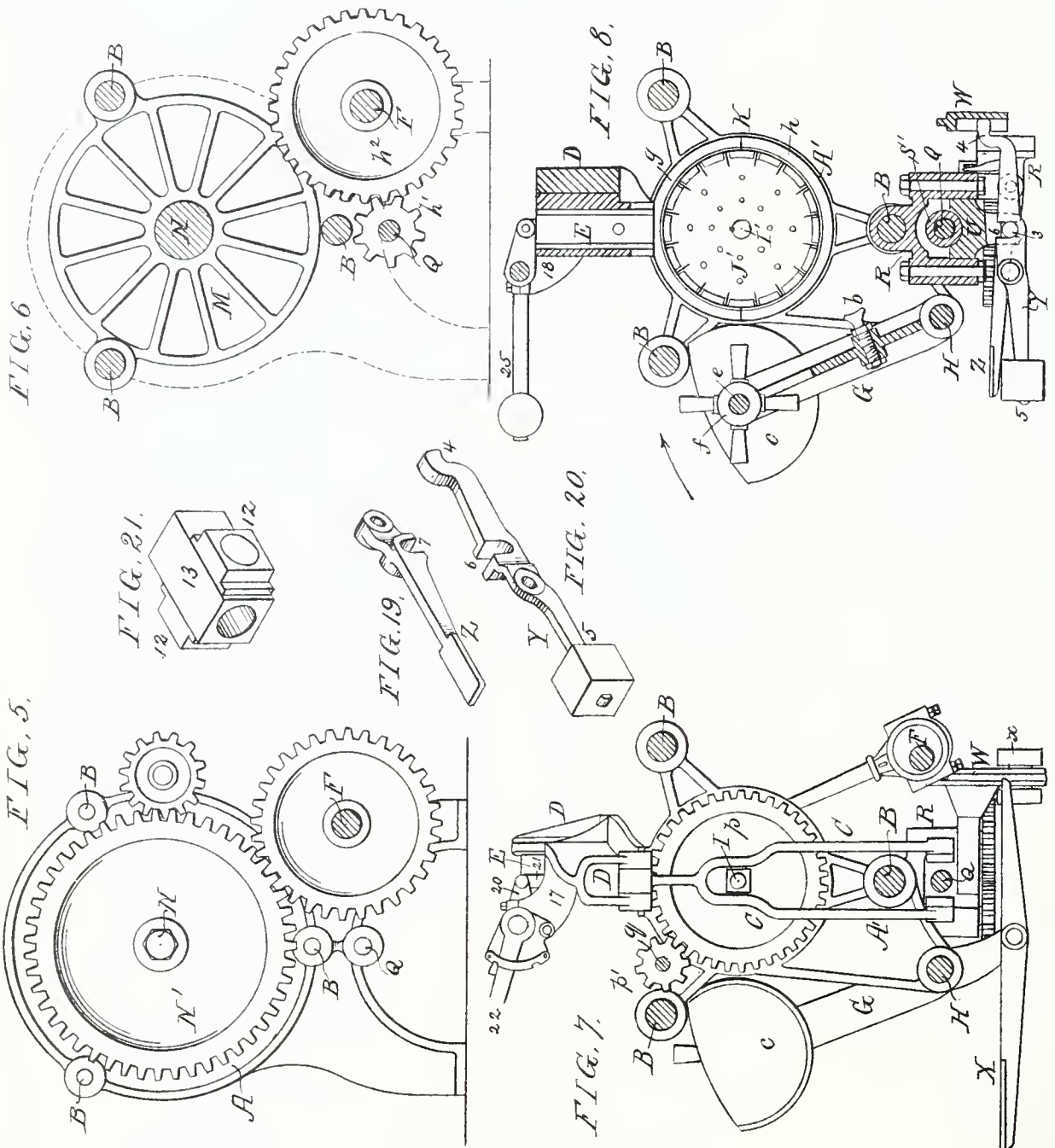
(No Model.)

5 Sheets—Sheet 3.

M. E. BEASLEY & E. M. HUGENTOBLE
BARREL MAKING MACHINE.

No. 300,193.

Patented June 10, 1884.



Witnesses:
Harry Drury
James J. Tobin

Inventors:
Maria E. Beasley
and
Emil M. Hugentobler
by their Attorneys
Howe & Jones

(No Model.)

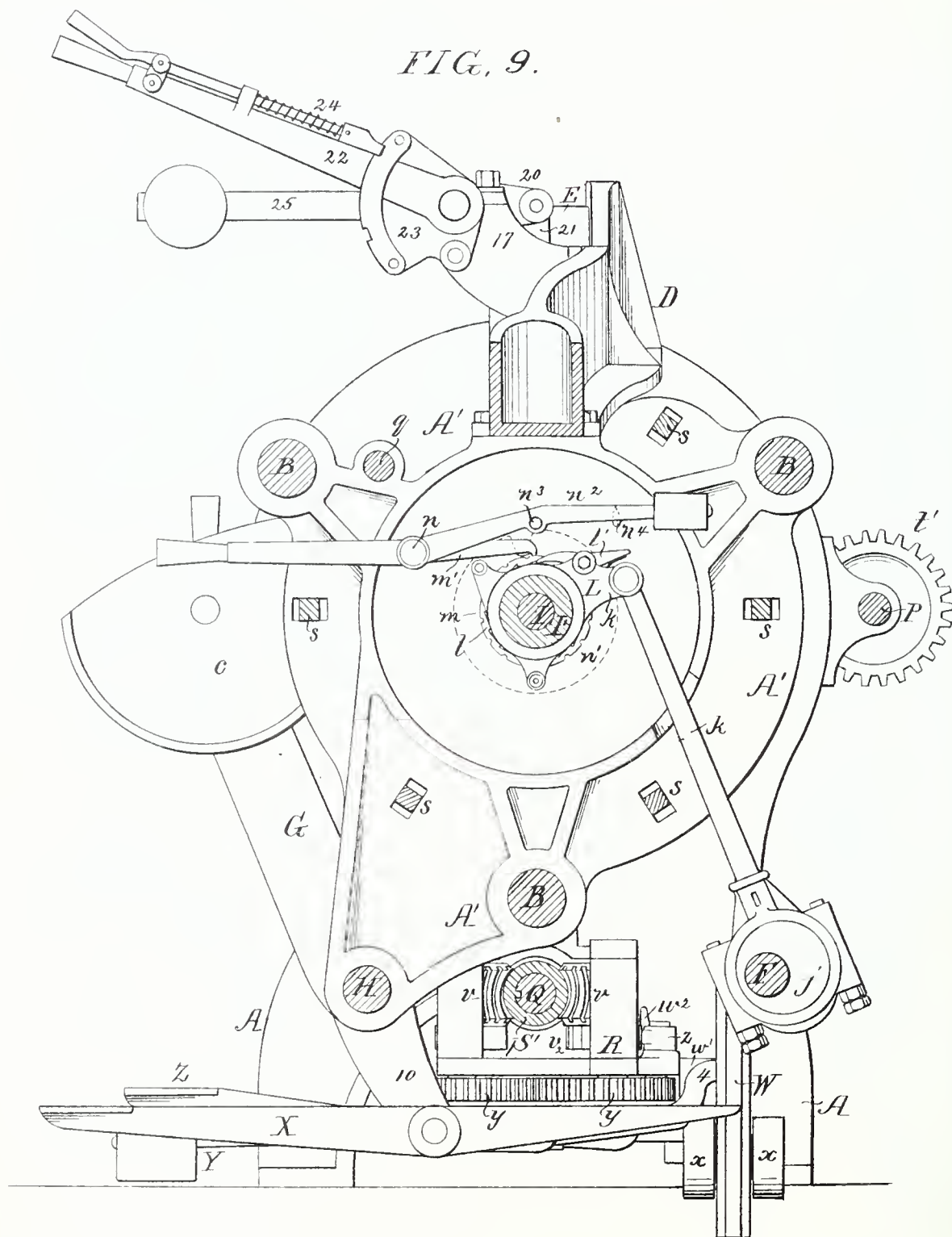
5 Sheets—Sheet 4.

M. E. BEASLEY & E. M. HUGENTOBLER

BARREL MAKING MACHINE.

No. 300,193.

Patented June 10, 1884.



Witnesses:

James J. Johns
Harry Drury

Inventors
Maria E. Beasley
and
Emil M. Hugentobler
by their Attorneys

Howson & Sons

(No Model.)

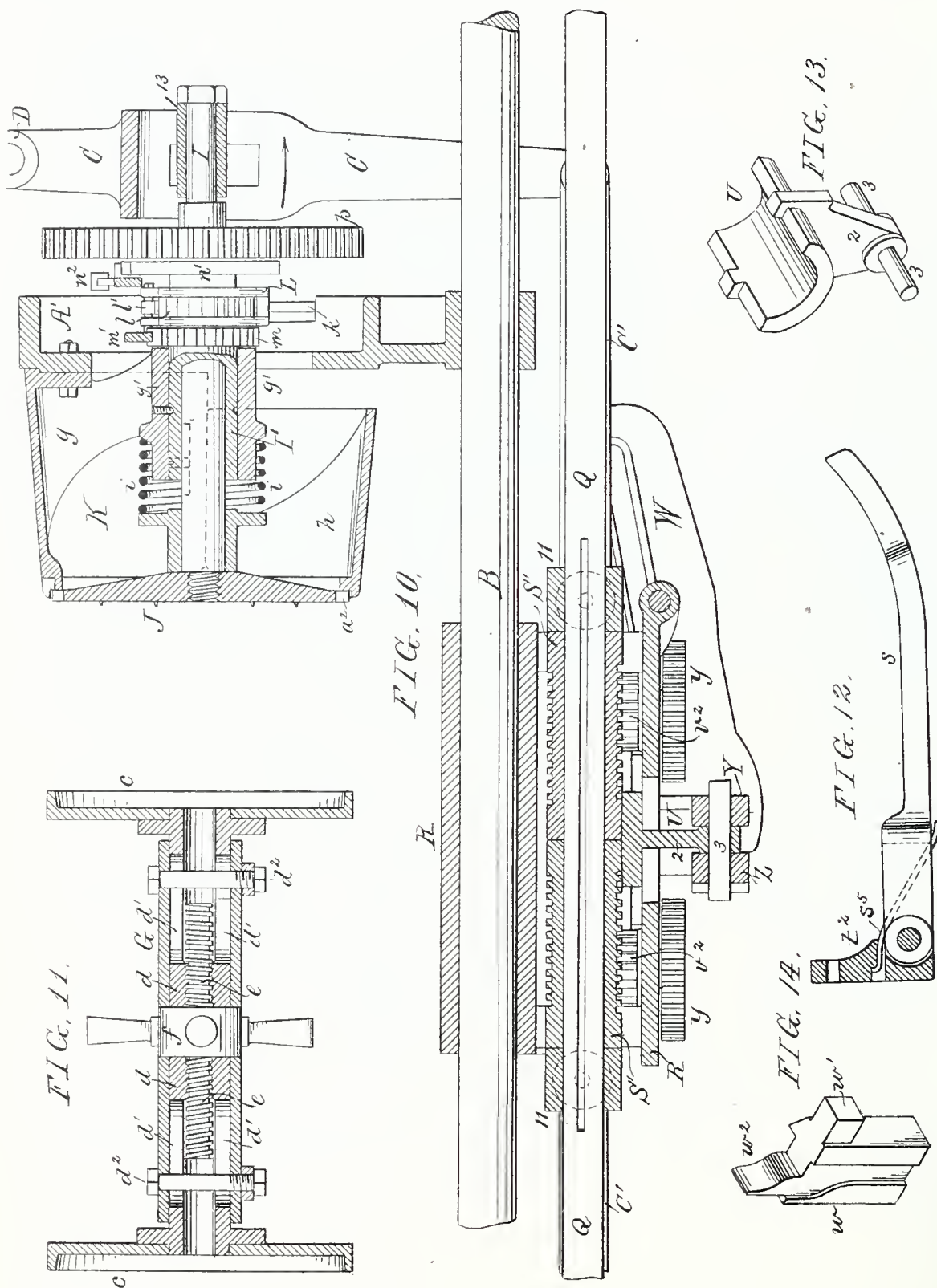
5 Sheets—Sheet 5.

M. E. BEASLEY & E. M. HUGENTOBLER

BARREL MAKING MACHINE.

No. 300,193.

Patented June 10, 1884.



Witnesses:
Harry Drury
James F. Tobin

Inventors
Maria E. Beasley
Emil M. Hugentobler
By their Attys.
Hosmer & Co.

UNITED STATES PATENT OFFICE.

MARIA E. BEASLEY, OF PHILADELPHIA, PENNSYLVANIA, AND EMIL M. HUGENTOBLE, OF NEW YORK, N. Y.; SAID HUGENTOBLE ASSIGNOR TO SAID BEASLEY.

BARREL-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 300,193, dated June 10, 1884.

Application filed May 7, 1883. (No model.)

To all whom it may concern:

Be it known that we, MARIA E. BEASLEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, and EMIL M. HUGENTOBLE, also a citizen of the United States, residing in New York city, New York, have invented an Improved Barrel-Making Machine, of which the following is a specification.

10 This invention relates to a machine for the manufacture or building up of barrels, the staves and heads having been first formed and cut to the required size by separate machinery. The barrel is formed by placing the heads in
15 the machine and fitting the staves around the periphery of the heads, and the barrel is then released and is ready to be operated on by a hooping-machine; or the hoops may be forced down in place by the usual method.

20 The construction and operation of the machine will be fully described hereinafter, reference being had to the accompanying drawings, in which—

Figure 1, Sheet 1, is a front elevation of our
25 improved barrel-building machine; Fig. 2, a section of the driving-gear; Fig. 3, Sheet 2, a plan view; Fig. 4, a sectional plan on line 1 2, Fig. 1; Fig. 5, Sheet 3, an end view of the machine; Fig. 6, a transverse section on line 3 4,
30 Fig. 1; Fig. 7, a transverse section on line 5 6, Fig. 1; Fig. 8, a transverse section on line 7 8, Fig. 1; Fig. 9, Sheet 4, a transverse section drawn to an enlarged scale on line 9 10, Fig. 1; Fig. 10, Sheet 5, a longitudinal section of part of the machine drawn to an enlarged scale; Fig. 11, a detached section of
35 the head-centering mechanism; Figs. 12, 13, and 14, detached views of parts of the machine; Figs. 15 and 16, Sheet 1, diagrams illustrating the fitting of the staves around the
40 heads of the barrel; Figs. 17 and 18, Sheet 2, and Figs. 19, 20, and 21, Sheet 3, detached views of parts of the discharging mechanism.

The frame of the machine consists of four
45 heads, A A A' A', through which pass three tie-bolts, B B B, the two end heads, A A, having suitable legs to support the structure.

Resting on the top and bolted to the two

heads A' A' is a frame, D, on which slides the
hopper E.

F is the main driving-shaft running the length of the machine and carrying at one end a driving-pulley, *a*.

There are five separate and distinct movements in this machine, and, in order to simplify the description, we will describe them
55 separately in the following order: First, the swinging frame for placing the heads centrally in the machine; second, the fitting of the staves around the heads; third, forcing the
60 hoops over the barrel; fourth, the releasing of the barrel; and, fifth, the raising and lowering of the hopper containing the staves.

The mechanism for placing the heads centrally in the machine is shown in Figs. 1, 3, 65
8, and 11, and is as follows:

G is a swinging frame pivoted to the shaft H, which is attached to the two heads A' A', and the extent of movement of this frame on its pivot inward is limited by a stop, *b*, striking
70 against part of the permanent frame.

The detailed construction of the upper part of the frame will be best observed by reference to Fig. 11, Sheet 5, which is a sectional plan of that part of the frame. Two disks, *c c*, flanged
75 to receive and hold the heads of the barrel, are attached to two sleeves, *d d*, which have their bearings in the upper part of the frame G. The disks are partially cut away to allow of the easy introduction and adjustment of the bar-
80 rel-heads. A handled collar, *f*, let into a slot in the frame G, carries right and left handed screw-bolts *e*, adapted to the internally-threaded sleeves *d d*. These sleeves have longitudinal slots *d'*, to allow bolts *d''* to pass through
85 the frame and sleeves to prevent the disks *c c* from turning when the screw-bolt *e* is turned. Thus by turning the collar *f* and its screw-bolt in one direction the disks *c c* are forced out, and by turning them in the opposite direction the
90 disks are caused to approach each other.

The fitting of the staves around the head is effected by mechanism shown in Figs. 1, 3, 8,
9, 10, 15, and 16.

J J' are two disks, which are attached to the
95 shafts I I, and on the periphery of these disks

are thin radial ribs or partitions a^2 , leaving intermediate spaces for the reception and separation of the staves as they are fed into the machine.

5 Referring to Fig. 10, Sheet 5, the cone K, in the end of which fits the disk J, is made in two parts, g h , the upper half, g , of the cone being stationary and bolted to the head A' of the main frame, and having a bearing, g' , for the sleeve I' on the shaft I. The lower half, h , of the cone K is hung to the shaft I, and can slide with the shaft, but cannot revolve thereon. The shaft I revolves with the sleeve I', but has an independent endwise movement, for a purpose described hereinafter.

15 The object of making the cone K in two parts is to permit the retraction of the lower half with the disk, in order to discharge the barrel.

20 A spring, i , between flanges on the sleeves of the two halves of the cone, normally maintains the half-cone h and the disk J in their forward positions. (Shown in Fig. 10.)

25 The cone on the opposite side of the machine, in which fits the disk J', is identical with the cone K, just described.

The mechanism for intermittently rotating the shafts I I and disks J J' will now be described, reference being had to Figs. 9 and 10.

30 On the main shaft F of the machine is secured an eccentric, j , the strap of which is connected by a rod, K, to an arm, K', on a rocking frame, L, which is loose on the sleeve I'. Attached to the sleeve is a ratchet-wheel, l , which has as many teeth as there are staves for the barrel. In the present instance sixteen staves are required to complete the barrel, and there are sixteen ratchet-teeth. A pawl, l' , is pivoted to the rocking frame L, and operates on the wheel l , each revolution of the main shaft thus turning the ratchet-wheel to the extent of one tooth. Adjacent to the ratchet-wheel l is a detent-wheel, m , on the periphery of which are notches corresponding with the teeth of the ratchet-wheel. The end of an arm, m' , pivoted to a stud, n , on the head A' of the main frame, drops into the notches on the detent-wheel m , to prevent the ratchet from carrying the disk J over the one-sixteenth turn, as the spaces between the ribs or partitions a^2 must be exactly under the hopper at each turn of the disk J. A wheel, n' , is attached to the sleeve I' on the opposite side of the rocking frame L from the detent-wheel m , and a weighted arm, n^2 , pivoted to the stud n on the head A' of the main frame, has a pin, n^3 , resting on the periphery of the wheel n' . This wheel has a notch, as indicated by dotted lines in Fig. 9, which is set so as to come under the pin n^3 when all the staves are in place around the heads of the barrel. Then the weighted arm n^2 falls, and at the same time a lug, n^4 , on the said arm n^2 trips the pawl l' up out of contact with the ratchet-wheel l , so that although the frame L still continues its rocking motion, the pawl being out of contact with the wheel l , no motion will be given to sleeve I' and shaft I. The arm n^2 is provided

with a handle on the front side of the machine to enable the operator to release the wheel n' from the arm and allow the spring-pawl l' to resume its normal position and impart motion to the disk J intermittently, as before. A shaft, q , has its bearings in the two heads A A', and communicates the intermittent rotary motion imparted to sleeve I' to the opposite sleeve I', carrying the other disk J' through the medium of the two sets of gear-wheels and pinions p p' and p^2 p^3 , the gear-wheels p p^2 being on the sleeves I' I' and the pinions p' p^3 on the shaft q .

35 The mechanism for forcing the hoops over the staves after the latter have been applied to the heads is shown in Figs. 1, 3, 9, and 12, and is as follows: Two heads, M M', are mounted so as to slide on the rods B, (best observed in Fig. 1,) the head M at one end of the machine and the head M' at the opposite end. The sliding head M has a suitable screw-nut, t for the passage of the screw-bolt N, which is adapted to turn in bearings in the frame A, and carries at its outer end a cog-wheel, N', which gears into a wheel, N², attached to a sleeve, M², on the main driving-shaft F. On this sleeve is a loose pulley, a' , revolving in a different direction from the pulley a .

40 Between the driving-pulley a on the shaft F and the pulley a' is a clutch-sleeve, u , sliding on but turning with the sleeve M². This clutch-sleeve has teeth to engage with teeth on the hubs of either of the two pulleys a a' , so that the heads M M' may be forced forward when the clutch-sleeve u engages with the teeth of the pulley a , or drawn backward when it engages with the teeth of the pulley a' , or remain stationary when midway between the said pulleys. A shaft, P, at the back of the machine, serves to connect the screw-shaft N of the head M to the screw-shaft N of the head M' at the opposite end of the machine by gearing N' N'².

45 To lugs l^2 on the face of each of the heads M M' are pivoted a number of arms, s —five in the present instance. These arms are adapted to pass through and are guided in slotted openings in the frames A' A', and the front ends of the arms are forked and caused to bear on the cone K by the springs s^5 . The object of these fingers is to force the hoops onto the barrel, as described hereinafter.

50 The mechanism for releasing the finished barrel is shown in Figs. 1, 4, 7, 8, 9, 10, 13, 14, 17, 18, 19, 20, and 21, and is as follows: A box or casing, R, is attached to the lower stay-bolt, B, in the middle of the machine. A shaft, Q, passes through this casing R, and on it are mounted two screw-sleeves, s' s' , connected to the shaft by a key or spline, so as to rotate therewith but be capable of moving longitudinally thereon, one of the sleeves having on its exterior a right-hand thread and the other a left-hand thread. These screws mesh with worm-wheels v v' v' , which have their bearings in the casing R. The wheels v v' , gearing with each screw, are geared together by pinions y on the under side of the casing R, Figs. 9, 10, and 14. The shaft Q is geared, through the pinions h'

and gear-wheels h^2 , with the main driving-shaft F, Fig. 4, so that a constant rotary motion is imparted to the said shaft Q and to the sleeves s' , and the screw-threads on these wheels in turn impart rotary motion to the wheels v . If, then, these wheels v are locked at any moment so as to prevent their rotation, the continuing rotation of the shaft Q and sleeves s' will cause the latter to move apart longitudinally on the shaft Q until the said wheels v are unlocked or released. The devices for locking and releasing those wheels will be referred to hereinafter. Bearing against the opposite ends of these sleeves s' are loose collars 11, which are connected by links C', Fig. 4, to two pendent swinging arms, C, Figs. 1 and 7, pivoted at their upper ends to the upper part of the frame and forked at their lower parts, Fig. 7. These swinging arms are connected to the outer ends of the shafts I, Fig. 10, through the medium of a universal coupling, so that the movement of the arms C on their pivots will impart a corresponding longitudinal movement of the shafts I with the disks J and halves h of the two cones.

The coupling between the arm C and shaft I is illustrated in perspective in Fig. 21, and consists of a sleeve, 13, mounted on the shaft I, and provided with swiveled blocks 12, adapted to vertical slots in the forks of the arm C, Figs. 1 and 10.

The mechanism we prefer to use for locking and releasing the wheels $v v'$ will be understood on reference to Figs. 4, 8, 9, 10, 13, 14, 17, 18, 19, and 20.

To the under side of the two wheels v are secured ratchet-wheels v^2 , Fig. 17, into which may be geared the pawls on the bell-crank levers $z z$, springs acting on these levers so as to tend to throw them into gear with the ratchets, whose teeth are arranged in such a direction that when the said pawls are thrown into gear with them they (the pawls) will prevent the further rotation of the wheels $v v'$ by the screw-sleeves s' . Different devices may be employed for throwing these pawls into or out of gear; but we prefer those shown in the drawings. A vertically-sliding block, w , Fig. 14, has a wedge-shaped projection, w^2 , acting on the inner faces of the long arms of the levers z , and a projection, w' , on this block is acted on by arms on a trip-lever, W, Fig. 18, pivoted to the frame. This lever W is pivoted to the frame R, and a weight, x , runs on ways in the lever, so that when one end of the lever is tilted above the center the weight x rolls down to the lower end of the lever, thereby completing the full movement of the said lever. The block w has a projection, w' , which enters a recess in the end of the lever W, and a tapered projection, w^2 , which acts on the long arms of two pawls, $z z$, pivoted to the easing R. The short arms of the pawls $z z$ act on ratchet-wheels v^2 on the hubs of the worm-wheels $v v'$. (Best observed in Fig. 17.)

On the under side of the easing R are pivoted two levers, Y and Z. One end, 4, of the

lever Y is curved and projects into a slot in the lever W, the other end, 5, being weighted. A block, U, sliding in the easing R, bears against the under side of the heads of the screw-sleeves s' , and a pin, 3, passes through a lug, 2, on the under side of the block U, one half of this pin fitting into a slot, 6, in the top of the lever Y, and the other half in a slot, 7, in the under side of the lever Z. Thus as soon as the screws s' move apart, the block U is forced up between them by the weighted lever Y, the block keeping the screws apart until the operator presses on the lever Z, which presses down on the pin 3 and releases the block U from between the two screws $s' s'$. At the same time that the weighted lever Y raises the block U it also tilts up the end of the lever W, and the weight x rolls to the end 9 of the lever and elevates the block w , the portion w^2 of which actuates the spring-pawls $z z$ and releases the short arms of the pawls from the ratchet-wheels v^2 , the wheels $v v v' v'$ being thereby unlocked, so as to be free to turn with the screw-sleeves $s' s'$. As soon as this is effected, the sleeves are forced against the block U, and when said block is depressed they are forced together, owing to the action of the springs i in the cones K upon the shafts I, the movement being transmitted through the medium of the arms C and links C'. A treadle-lever, X, hung to a hanger, 10, serves to tilt the outer end of the lever W and operate the same, so as to induce the movement of the block w in the opposite direction to that above described. As soon as the treadle-lever is pressed down by the operator and the lever W is shifted, the block w is depressed, the pawl-levers Z lock the wheels $v v'$, and the screw-sleeves s' move apart, the collars 11 moving with them, so that the arms C C, which are connected to the collars, will force the shafts I I in the direction of the arrows, Fig. 1, thus withdrawing the disks J J' and the lower halves, h , of the cones K away from the heads of the barrel, thereby releasing the barrel, which falls out of the machine as soon as the sleeves have been moved apart sufficiently. The block U then enters between them and keeps them apart; but as soon as the said block U is withdrawn by pressing on the lever Z the springs $i i$ in the cones K force the disks J J', with the lower halves, h , of the cones, out to their original positions and the screw-sleeves $s' s'$ approach each other.

The mechanism for raising and lowering the hopper containing the staves is shown in Figs. 1, 3, 7, 8, 9, and is as follows: A projection on the back of the hopper E slides in a dovetail groove, 15, in the frame D, the hopper being steadied by rails 16 on the frame. Two bearings, 17 and 18, for a shaft, 19, project from the frame D, and on this shaft are two arms, 20, connected to studs on the hopper E by links 21. At one end of the shaft 19 is a lever, 22, working in a segment, 23, attached to the frame, this lever having a spring bolt, 24, to enter recesses in the segment. By moving

the handle up or down the hopper E can be raised or lowered through the medium of the shaft 19, arms 20, and links 21, and locked in either position by the engagement of a bolt, 24, with the recesses in the segment. A weighted lever, 25, is attached to the shaft 19 at the opposite end to that which carries the operating-lever 22. This weighted lever 25 counter-balances the hopper E.

The object of raising the hopper is to permit the hoops to be placed on or drawn off of the cones K K, on which the hopper rests when down.

The operation of the machine is as follows:

The hoops are first placed on the cones K in front of the fingers *s*, the swinging frame G being in position shown in Fig. 8—that is to say, in its outer position. The two heads of the barrel to be formed are placed in the flanged disks *c c*, and the frame G is then pushed over in the direction of the arrow, Fig. 8, until it is arrested by the stops, the heads being then in line with the disks J J'. By turning the screw-bolt *e*, the heads of the barrel are forced against the disks, and are held by the small pins or projections on the faces of the latter, the frame G being then withdrawn. The handle 22 is then operated to permit the descent of the hopper E, which rests on the cones K K. The hopper is filled with staves, and, the machine being started, the disks J J' are turned to the extent of one stave, or one-sixteenth of a revolution, on each revolution of the driving-shaft. The staves rest directly one upon another, the lowest bearing upon the disks J J' between two of the fins *a*², so that as the disk is rotated stave after stave drops onto the disks and is carried around under the flanges 26 of the cones K, which prevent any of the staves from falling out. (See Figs. 15 and 16.) When all of the staves have been adjusted, the heads M M' are put in motion by shifting onto the pulley *a* the clutch *u*, which has occupied a central position between the two pulleys *a a'*. The screw-shafts N are turned so as to force the heads M M' toward each other, the fingers *s* acting on the hoops which have been deposited on the cones K, and forcing said hoops from the cones and onto the barrel, the staves of which are thus compressed around the heads, so as to firmly retain the same. The clutch *u* is then thrown into gear with the wheel *a'*, and the movement of the screw-shafts N is thereby reversed, so as to retract the heads M M' and their fingers *s*, the clutch being then restored to the intermediate position, so as to throw the screw-shafts N out of gear. Pressure upon the treadle X then causes the retraction of the shafts I through the medium of the devices described, and this causes the withdrawal of the disks J J' and the lower halves of the cones K, so as to release the barrel, which falls from the machine onto the floor or into a suitable receptacle. The operation is completed by depressing the lever Z, so as to release the screw-sleeves from the control of

the block U and wheels V V', and thus permit the disks J J' and the lower halves of the cones K to be forced by the springs *i* back to their original position prior to a repetition of the above-described operations.

Instead of being used for making the barrel complete, as described, the machine may, if desired, be employed for setting up the body only of the barrel, the frame G and the mechanism carried thereby being dispensed with or thrown out of use in this event, and in some cases the disks J J' may be rotated slowly but continuously instead of having the intermittent movement described imparted to them, the latter method of operation, however, being preferred.

We claim as our invention—

1. The combination, in a barrel-forming machine, of a stave-feeding device, opposite disks constructed to receive and support upon their peripheries the ends of the staves, mechanism for rotating said disks, and the flanges 26, surrounding but independent of the disks, and notched for the passage of the staves, said flanges projecting over the ends of the staves, whereby they serve to retain said staves in place on the peripheries of the disks as the latter are rotated, all substantially as set forth.

2. The combination, in a barrel-forming machine, of a stave-feeding device, opposite disks constructed to receive and support upon their peripheries the ends of the staves, mechanism for rotating the disks, the flanges 26, surrounding but independent of the disks and notched for the passage of the staves from the feeder, said flanges projecting over the ends of the staves, so as to retain the same upon the peripheries of the disks, the opposite hoop-holders and fingers for forcing the hoops from said holders and onto the barrel while the ends of the staves are within the flanges 26, as set forth.

3. The combination, in a barrel-forming machine, of the stave-feeding device, the opposite disks, J J', constructed to receive and support upon their peripheries the ends of the staves, and having on said peripheries projecting pins *a*², forming stave-sockets, mechanism for rotating said disks, and the retaining-flanges 26, surrounding but independent of the disks and notched for the passage of the staves, said flanges projecting over the ends of the staves and serving to retain them upon the peripheries of the disks as the latter are rotated, as set forth.

4. The combination, in a barrel-making machine, of a stave-feeding device, opposite disks constructed for the reception and support of the ends of the staves, and having their faces provided with means for retaining the heads of the barrel, mechanism for rotating said disks, the flanges 26, extending completely around the disks, and notched for the passage of the staves, and projecting over the ends of the same, so as to serve as a retainer, opposite hoop-holders, and the hoop-driving fingers, as set forth.

5. The combination of the disks J J' and

means for rotating the same, the cones K, having notched flanges 26 upon the ends of the cones, and constructed to overlap the ends of the staves, a stave-holding box, E, located 5 above the notched portions of the flanges, and means, substantially as described, whereby said box can be raised and lowered; as set forth.

6. The combination of the stave-feeder, the 10 opposite disks J J', the flanges 26, projecting over the disks so as to retain staves carried thereby, each flange comprising a lower longitudinally-movable half and an upper fixed half notched for the passage of the staves, and 15 mechanism, substantially as described, for rotating the disks and for retracting the same and the lower halves of the flanges, as set forth.

7. The combination of the opposite disks J 20 J', situated within the cones K K, with the swinging frame G and disks c c, and with mechanism for advancing and retracting said disks, as set forth.

8. The combination, in a barrel-forming machine, of the disks J J', constructed to receive 25 the staves, the shafts or sleeves I, carrying said disks, gearing connecting said shafts or sleeves, the ratchet-wheel m on one of the shafts or sleeves, the rocking frame L, operated continuously, and having a pawl engaging 30 with the ratchet-wheel, the ratchet-locking wheel n', and the locking-lever n², constructed as described, whereby it trips the pawl and throws the same out of gear on dropping into position to lock the wheel n', as 35 set forth.

9. The combination of the disks J J' and their shafts I, the pivoted arms C, connected thereto, the longitudinally-movable screw-

sleeves s' s', means for connecting one sleeve 40 to one arm and the other to the opposite arm, devices for rotating the sleeves, wheels gearing into said sleeves, and mechanism for locking and releasing said wheels, as set forth.

10. The combination of the disks J J', the 45 shafts I, the arms C, connected thereto, the longitudinally-movable screw-sleeves s' s', connected one to one arm and the other to the opposite arm, devices for rotating said sleeves, wheels v, gearing into the sleeves, ratchets 50 v² on said wheels, pawl-levers z, adapted to the ratchets, and a wedge-block, w, adapted to act upon said levers, as set forth.

11. The combination of the disks J J', the 55 shafts I, the arms C, connected thereto, the longitudinally-movable screw-sleeves s' s', connected one to one arm and the other to the opposite arm, devices for rotating said sleeves, the wheels v, gearing into the sleeves, the 60 ratchets v² on said wheels, the pawls z, adapted to the ratchets, the wedge-block w, acting on the pawls, the balance-lever W, controlling said wedge-block, and having a movable 65 weight, x, the operating-treadle X, constructed to tilt said lever, the weighted lever Y, adapted to reverse the same, the block U, adapted to fit between the sleeves s' s', and having a pin 70 for acting on the lever Y, and the restoring-lever Z, constructed to depress the block U, as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

MARIA E. BEASLEY.

EMIL M. HUGENTOBLE.

Witnesses:

HARRY L. ASHENFELTER,
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(No Model.)

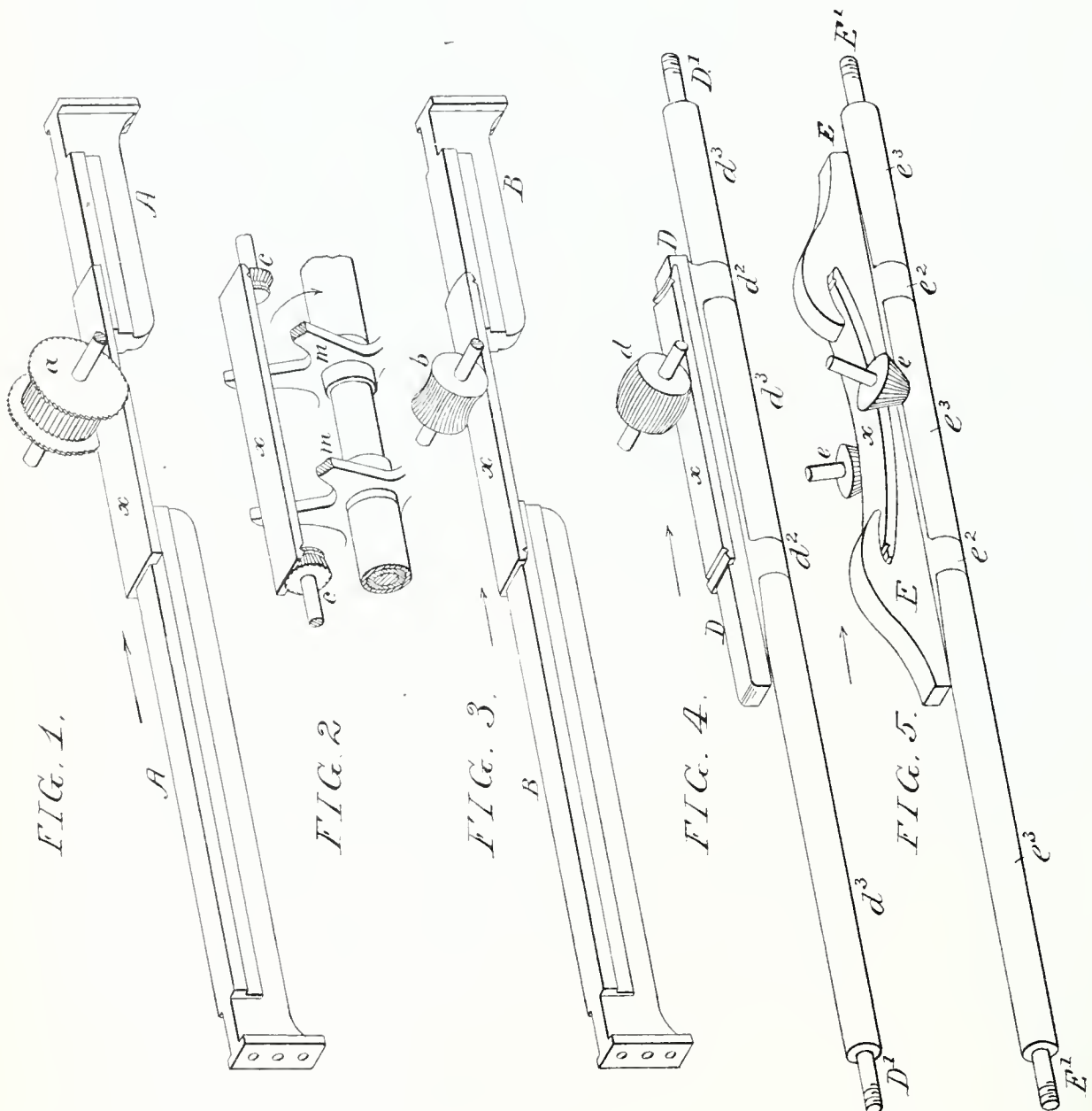
5 Sheets—Sheet 1.

M. E. BEASLEY & E. M. HUGENTOBLE

BARREL STAVE SHAPING MACHINE.

No. 300,194.

Patented June 10, 1884.



WITNESSES

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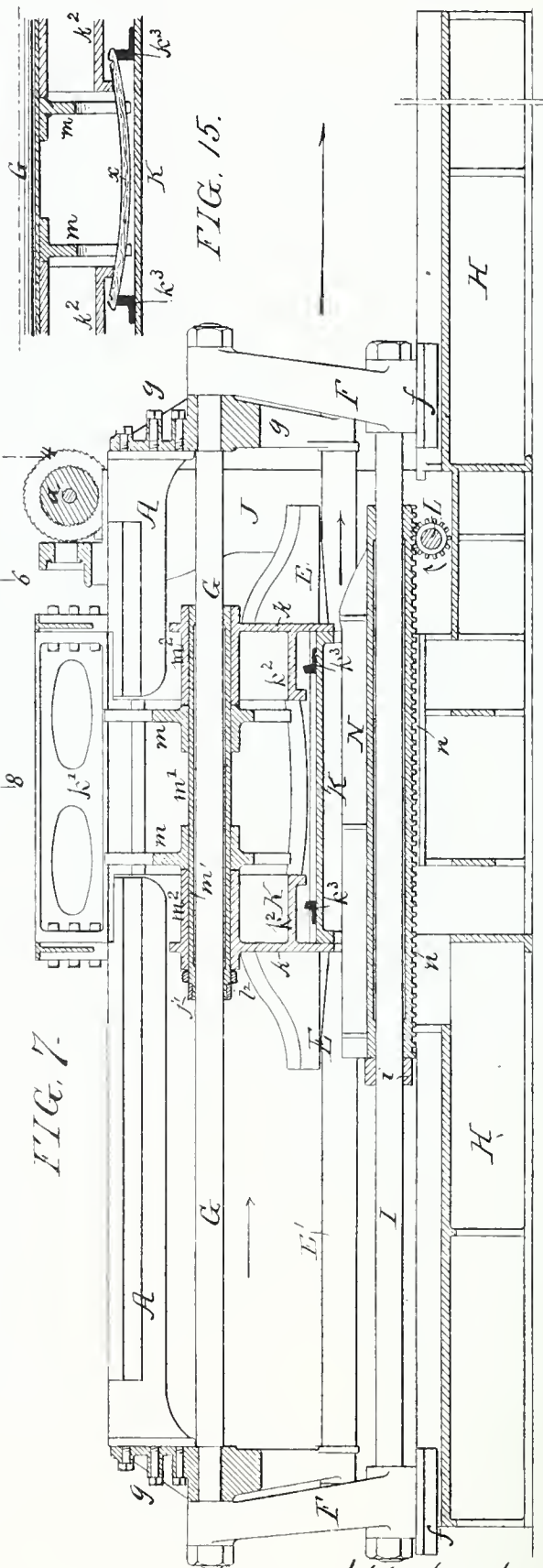
Emil M. Hugentobler

by their Attorneys.

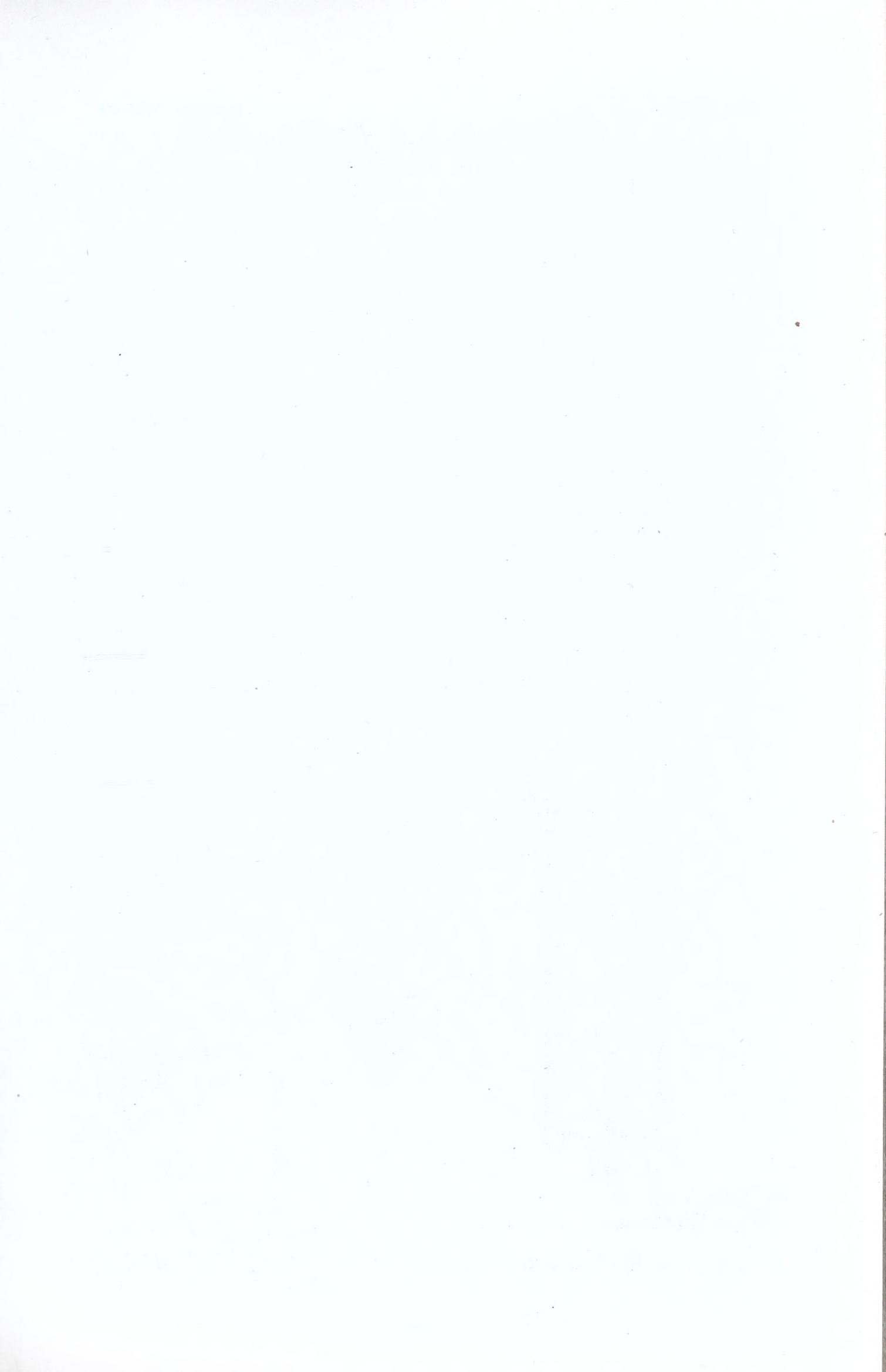
Howson & Son

5 Sheets—Sheet 2.

Patented June 10, 1884.



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(No Model.)

5 Sheets—Sheet 3.

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FIG. 8.

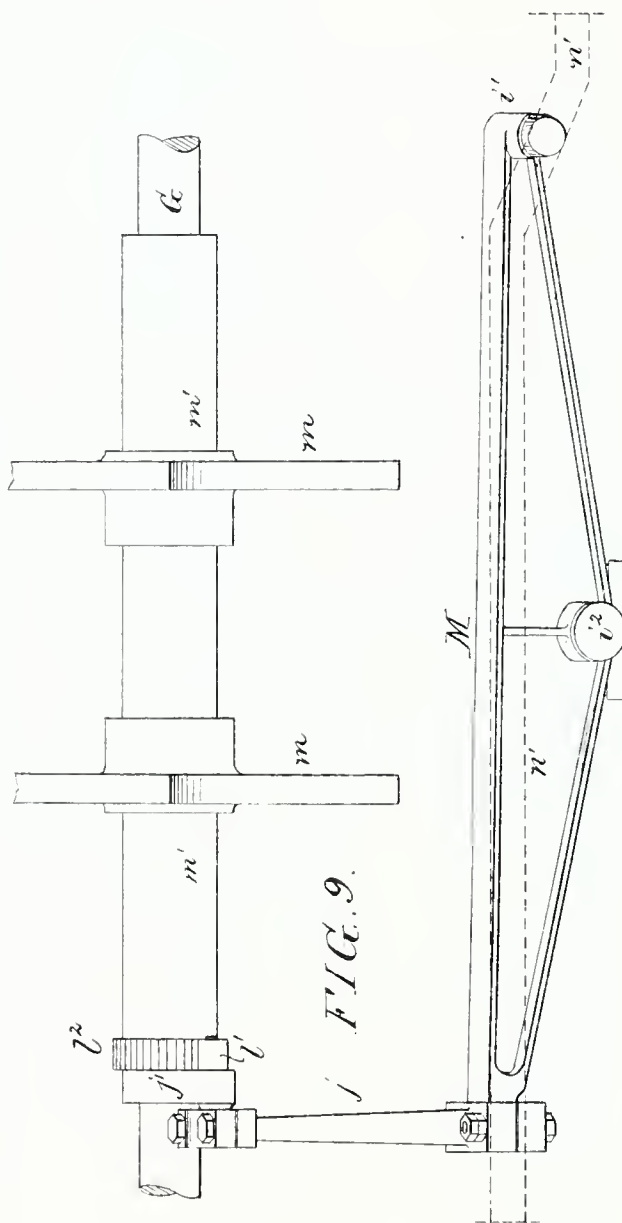
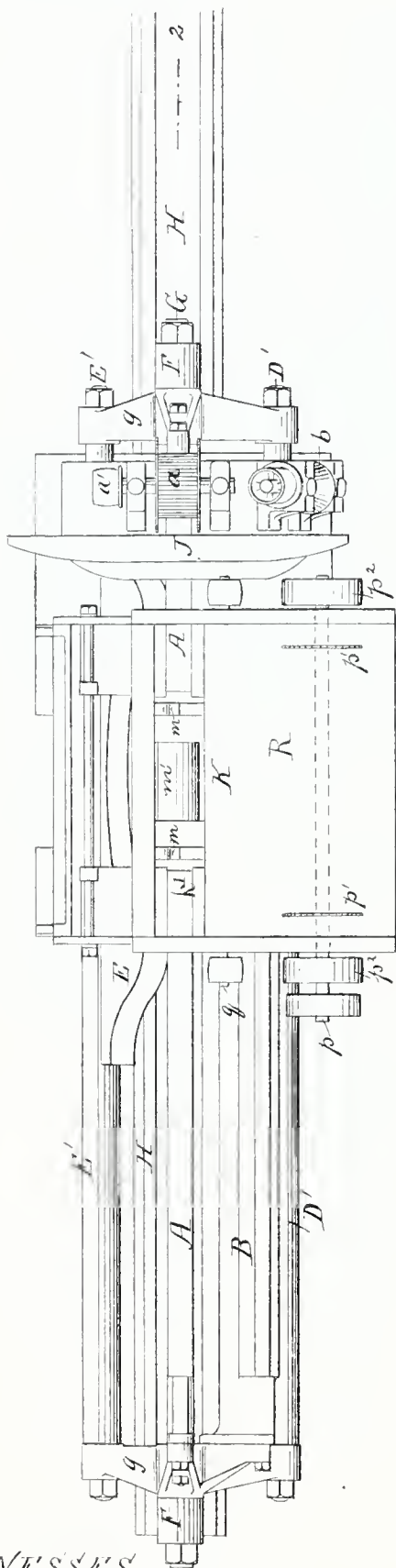


FIG. 9.

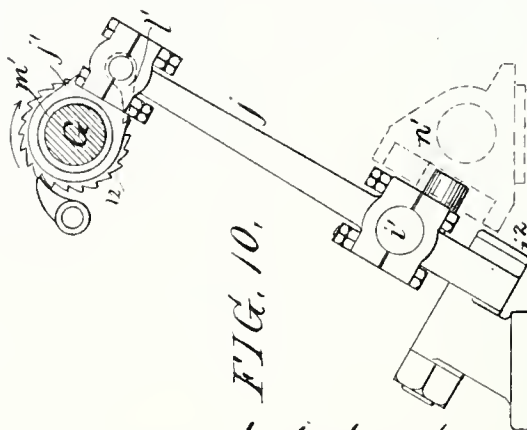


FIG. 10.

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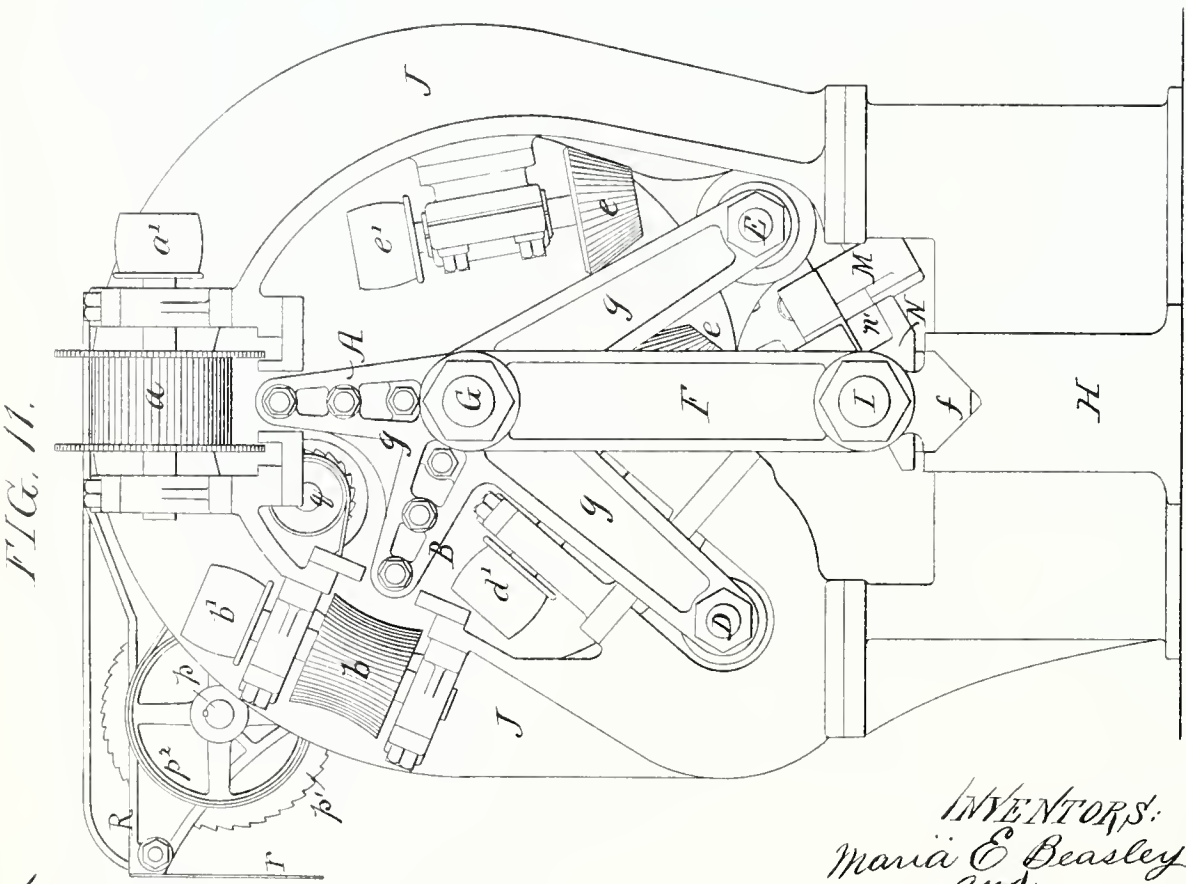
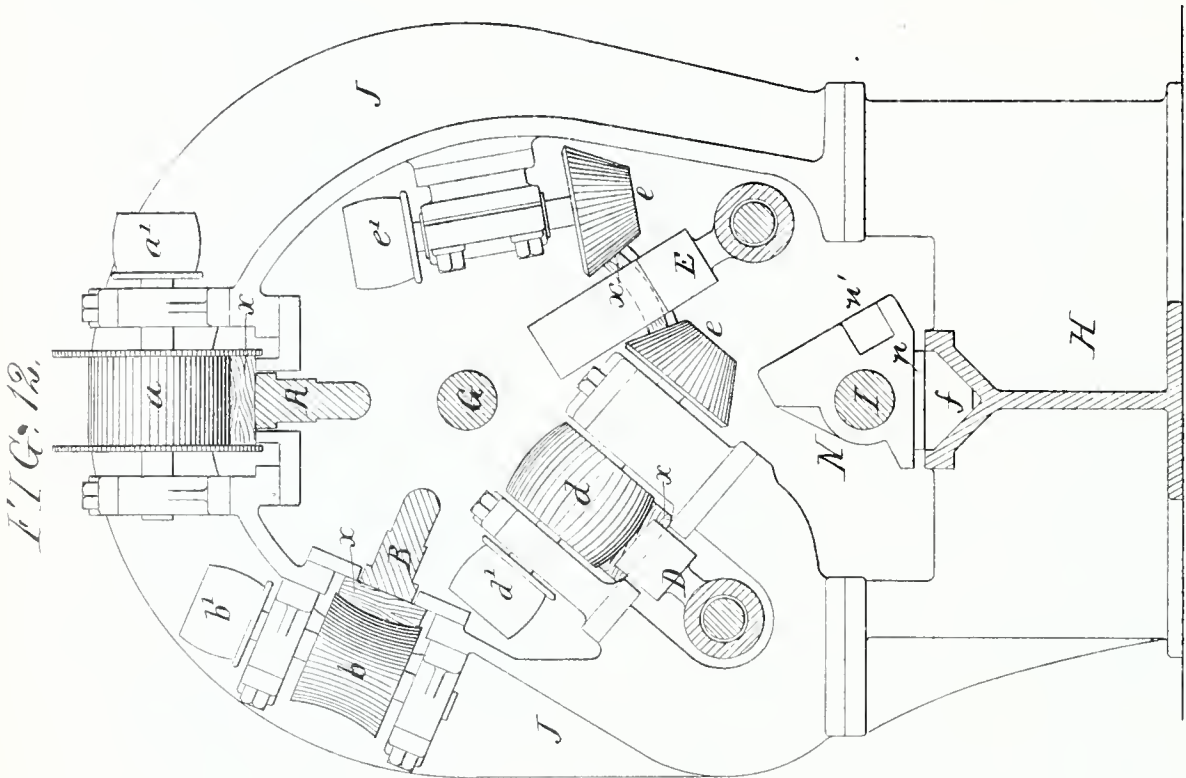
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5 Sheets—Sheet 4.

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(No Model.)

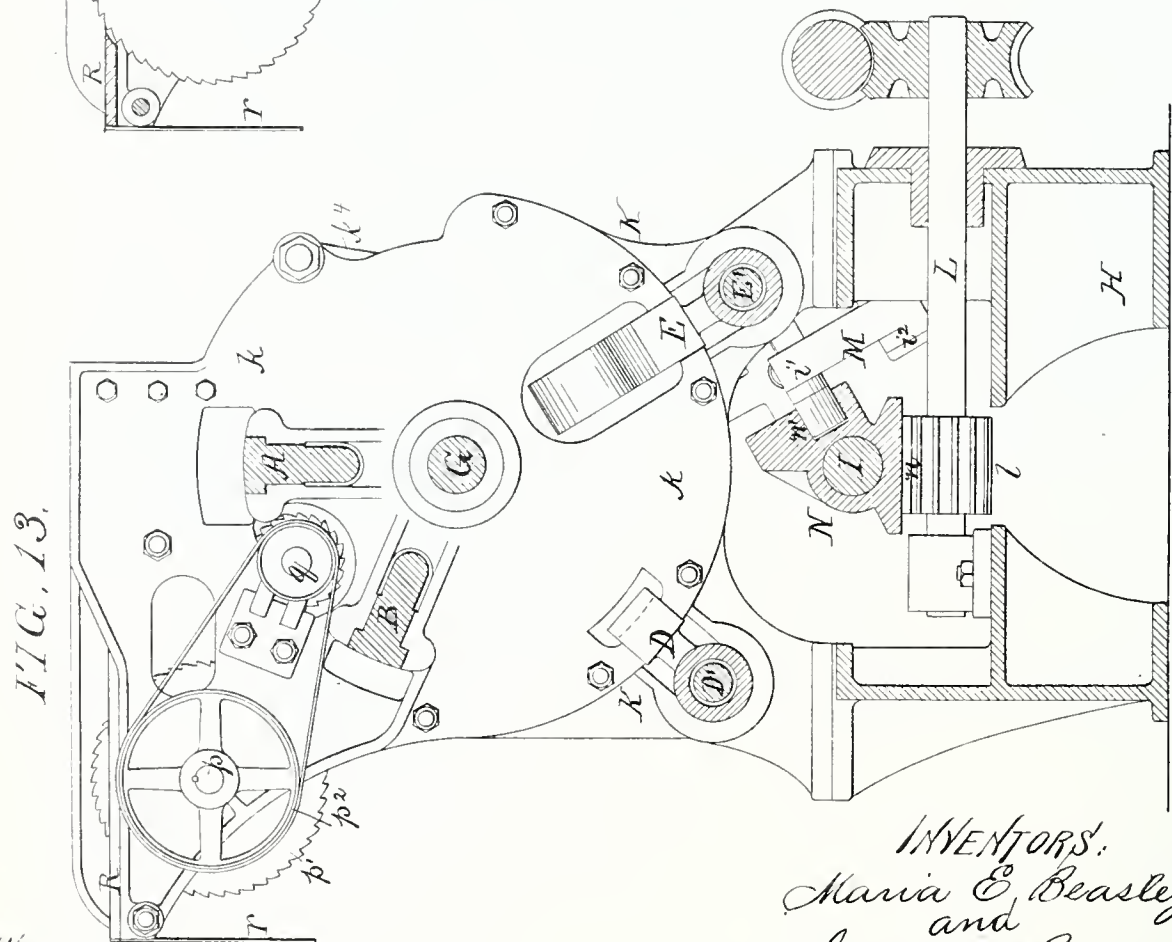
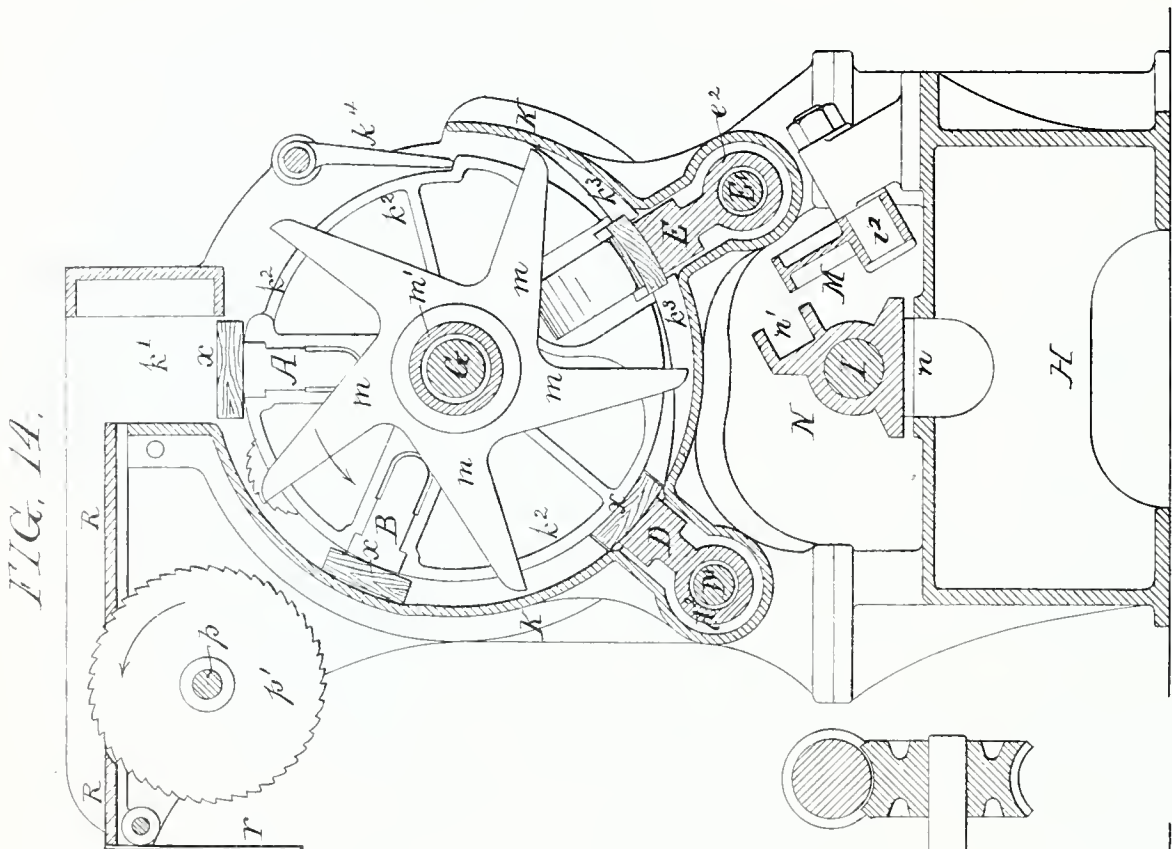
5 Sheets—Sheet 5.

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UNITED STATES PATENT OFFICE.

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BARREL-STAVE-SHAPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 300,194, dated June 10, 1884.

Application filed May 14, 1883. (No model.)

To all whom it may concern:

Be it known that we, MARIA E. BEASLEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, and EMIL M. HUGENTOBLE, also a citizen of the United States, residing in New York city, New York, have invented an Improved Barrel-Stave-Shaping Machine, of which the following is a specification.

Our invention relates to certain improvements in the manufacture of staves for barrels, casks, &c.; and our invention consists of an improved machine for automatically cutting, planing, chamfering, crozing, and dressing stave-blanks in a succession of steps, as more fully described hereinafter.

In the accompanying drawings, Figures 1, 2, 3, 4, and 5, Sheet 1, are diagrams showing the different stages of progress in the manufacture of staves by our machine. Fig. 6, Sheet 2, is a front elevation of the machine. Fig. 7 is a longitudinal section on the line 1 2, Fig. 8. Fig. 8, Sheet 3, is a plan view. Figs. 9 and 10 are detached views of the feeding mechanism. Fig. 11, Sheet 4, is an end view of the machine. Fig. 12 is a transverse section on the line 3 4, Fig. 6. Fig. 13, Sheet 5, is a transverse section on the line 5 6, Fig. 6. Fig. 14 is a transverse section on the line 7 8, Fig. 6. Fig. 15, Sheet 2, is a view illustrating the temporary bending of the stave.

The successive operations in the manufacture of the staves accomplished by our machine will be best understood by reference to the perspective diagrams, Figs. 1 to 5, inclusive. A stave-blank, *x*, having been cut to the proper length for the stave to be produced, is placed in a holder, A, as shown in Fig. 1, and this holder is then traversed longitudinally beneath the rotary cutter *a*, which planes the surface of the blank and at the same time cuts it to its proper width. Then the blank is transferred by the intermittent-feed mechanism to a second holder, B, Fig. 3, and as it passes to this second holder its opposite ends are subjected to the action of a pair of rotary cutters, *c c*, which croze the groove in the blank for the subsequent reception of the barrel-heads, and at the same time chamfer or bevel the ends of the blank. The latter hav-

ing been then transferred to the second holder, B, is by the latter traversed longitudinally beneath a concave rotary cutter, *b*, which rounds the outer surface of the stave to the required curve for the diameter of the barrel. The partially-finished blank is now transferred by the feed mechanism to a third holder, D, Fig. 4, where the reverse side of the stave is subjected to the action of a rotary convex cutter, *d*, in a similar manner to form the inside curve on the stave. The blank is now finally passed to a fourth holder, E, Fig. 5, and on its way to the latter it is passed between devices which temporarily impart to it the longitudinal bend it will have to assume when it forms a part of the barrel. While in this bent condition it is inserted in the holder E, and by the longitudinal movement of this holder the bent blank is passed between a pair of rotary cutters, *e*, whose cutting-faces are at such an angle to each other as to dress the opposite edges of the stave to the bevel or angle necessary for the accurate fitting together of the staves when the barrel is formed. The feeding apparatus ejects the stave thus produced from the holder E and from the machine, whence it may be transferred to the steaming-box. It will be understood that in the machine the successive operations above described are all carried on at the same time on successive blanks.

We will now proceed to describe in detail the construction of the machine, referring to Figs. 6 to 15, inclusive, of the drawings.

On the bed-plate II of the machine is mounted a fixed frame or arch, J, which carries the rotary cutters *a*, *b*, *d*, and *e*, having their spindles mounted in suitable bearings, and provided with belt-pulleys *a'*, *b'*, *d'*, and *e'*, or other driving-gear, as illustrated in Figs. 11 and 12. For convenience, the cutter *d* and one of the cutters, *e*, are mounted on the same spindle.

The cutter *a* consists of a rotary planing-cutter of the width of the stave, and two circular saws on the sides of this planing-tool, to cut the blank to the required width.

The holders A, B, D, and E for the blanks are mounted on or form part of a traversing carriage, consisting, principally, of two heads,

g, united by a central rod, *G*, and by the rods *D' E'*, carrying the holders *D* and *E*. This carrier is mounted on legs *F F*, bolted at their upper ends to the heads *g*, through the medium of the central rod, *G*, and at their lower ends united by a tie-rod, *I*, Fig. 7, the lower ends of the legs having V-shaped slides *f*, Figs. 7 and 11, adapted to corresponding ways on opposite ends of the bed-plate. While we do not confine ourselves to any special holders for the blanks, it will be observed that we have shown two holders, *A* and *B*, bolted directly to the heads, each of these holders being in two parts to permit the free passage of the feed-wheels between them, and having their adjacent ends recessed for the reception of the opposite ends of the stave-blank.

The holders *D* and *E*, as shown in Figs. 4 and 5, have collars *d² d²*, fitting over their tie-rods *D' E'*, respectively, and securely elamped in position between the heads *g* by means of intermediate sleeves, *d³ c³*. The holder *D* is recessed for the reception of the blank *x* in a straight condition, while the face of the holder *E* is curved and its ends provided with fingers to hold the blank in precisely the curved form it should afterward assume in the barrel.

The box for receiving the blanks and containing the feeding devices is composed of a casing, *k*, of a substantially cylindrical form, having end pieces, *k k*, slotted for the free passage of the holders and blanks, Fig. 13, when the traversing carriage passes the blanks beneath the rotary cutters, as hereinafter described. The top of the casing is slotted to form a longitudinal hopper, *k'*, Figs. 8 and 14, for the passage of the blanks to the holders, and at one side of this hopper is a table, *R*, over which the blanks are first passed, and which is carried by extensions on the end plates, *k k*. Suitable circular saws, *p' p'*, mounted on a shaft, *p*, having its bearings in these extensions, project through slots in this table at a distance apart equal to the length of the stave.

Within the cylindrical portion of the casing are the chamfering and crozing cutters *cc*, Figs. 2, 13, and 14, whose spindles are mounted in bearings carried by the end plates, *k k*. These spindles are provided with belt-pulleys *q*, outside the end plates, in line with pulleys *p²* on the saw-spindle *p*, so that one can be driven from the other, Fig. 13.

A shield, *v*, is secured to the outer edge of the table *R*, to protect the operator, who stands on that side of the machine, from the portions of the circular saws *p'* below the table.

The end plates, *k k*, of the casing carry cylindrical ribbed flanges *k²*, Figs. 7, 14, and 15, which project inward, so as to support the ends of the stave-blanks in their transfer from one holder to the next. These flanges are recessed, Fig. 14, for the passage and guidance of the holders *A B*, and also for the passage of the holder *E*, as are the end plates, *k k*, Fig. 13.

The feeding device consists of a pair of five-

armed wheels, *m*, Figs. 7 and 14, mounted on a sleeve, *m'*, which is adapted to bearings *m²*, formed on the end plates, *k k*, Fig. 7. Through the center of this sleeve *m'* passes the central tie-rod, *G*, of the traveling carriage, which is thus guided, as well as by the V-shaped ways on the bed-plate. An intermittent rotary motion is imparted to this sleeve *m'* and the feed-wheels *m*, to transfer the blanks at the proper time from one holder to the next by means of the devices hereinafter referred to.

In the bottom of the easing *K* are two inclined ribs or cams, *k³*, Figs. 7, 14, and 15, on each side of the holder *E* and beyond the ribbed portion of the flanges *k²*, Figs. 7 and 15, but not quite as far apart as the length of the stave, so that when the latter is pushed by the arms of the wheel *m*, Fig. 14, from the holder *D* to the holder *E* the ends of the staves will travel up these cams *k³*, and will be bent by the ribbed ends of the flanges *k²*, Fig. 15, to the curve which it should assume in the barrel, and in that form is pushed into and held in the holder *E*.

The intermittent longitudinal motion is imparted to the traveling carriage from a shaft, *L*, carrying a pinion, *l*, which gears into a rack, *n*, forming part of the sleeve *N* on the tie-rod *I*. This sleeve may have a limited motion on the tie-rod, the extent of which is determined at one end by one of the legs *F*, and at the other by an adjustable collar, *i*, so that when rotary motion is applied to the shaft *L* the sleeve will, for a certain distance, move independently of the carriage, and will then traverse the latter with it. This lost motion, as we will proceed to explain, is for the purpose of insuring the movement of the feed mechanism for transferring the blanks from one holder to the other while the carriage is at rest.

On the side of the sleeve *N* is formed a cam-groove, *n'*, Figs. 12, 13, and 14, the shape of which is illustrated by dotted lines in Fig. 9, the inclined portion of the groove being equal to or less in length than the extent of lost motion between the sleeve *N* and the carriage. To this cam-groove is adapted a pin, *i'*, in the end of a rocking lever, *M*, mounted on a pivot, *i²*, on the bed-plate of the machine. The opposite end of this lever has a universal-joint connection with a link, *j*, pivoted to a pawl-carrier, *j'*, mounted loosely on the end of the sleeve *m'*. This carrier has a spring-pawl, *l'*, adapted to the teeth of a ratchet, *l²*, secured to or forming part of the sleeve *m'*. Thus with every longitudinal movement of the rack *N* there will be a corresponding vibration of the lever *M*. Owing to the cam *n'* through the link *j*, a backward or forward movement will be imparted to the pawl-carrier, and consequently there will be a feed motion of the sleeve *m'* and star-wheels *m* at the beginning of the forward movement of the rack *N* in the direction of the arrow, Fig. 7; and as the length of the cam portion of the groove *n'* is equal to or less than the lost motion between the side rack and the carriage, this feed motion of the star-wheels

m will be completed before the rack comes into contact with the leg F, to cause the traversing of the carriage.

The operation of the machine is as follows:

5 The operator feeds a strip of wood of the proper size over the table R between the two saws, p' , which cut the strip to the length of the stave, and the blank then passes through the hopper k' onto the holder A immediately
10 beneath, Figs. 1, 7, and 14. Meanwhile, motion having been imparted to the several rotary cutters and to the driving-shaft L in the direction of its arrow, Fig. 7, and the independent movement of the rack N having just
15 been completed to operate the feed-wheels m before the blank x falls onto the holder, the carriage will be traversed in the direction of the arrow, Fig. 7, and the blank will thus be brought under the action of the cutter a , which
20 surfaces the blank, and by means of its saws at the same time cuts the blank to the proper width. When the carriage reaches the end of its movement, and the blank x has passed the cutter, the motion of the shaft I will have
25 been reversed by automatic reversing mechanism such as is used on metal planing and other machines, and which is too well known to need illustration. The rack N then returns, the lost motion at the beginning of the
30 return movement accomplishing no special purpose, but being simply incidental to the lost motion of the forward movement. The carriage is then traversed back to its first position, Fig. 7, when the movement of the
35 shaft L and rack N will be again reversed, and while the latter is making its forward movement independently of the carriage the feed-operating devices will turn the wheels m the fifth of a revolution and transfer the blank x
40 from the holder A to the holder B, subjecting it in its passage to the action of the chamfering and crozing cutters c . At the same time a new blank is introduced onto the holder A, and the carriage then moves forward and sub-
45 jects the first and second blanks to the actions of the cutters b and a , respectively. The carriage then returns, and while it is stationary at the beginning of the forward movement of the rack the first blank is transferred from the
50 holder B to the holder D, the second from A to B over the cutter c , and a new one introduced onto A. The carriage is then moved forward again and the three blanks are dressed in their different stages by the cutters d b a ,
55 and the carriage then returns, the feed-wheel m turns the fifth of a revolution again, the first blank is transferred from D to E, the second from B to D, the third from A to B, over the cutters c , and a new blank applied to
60 A. The carriage then moves forward again and the four blanks are passed under the cutters c , e , d , b , and a , and when the carriage has returned to its first position again the partial revolution of the wheels m causes the
65 transfers of the blanks above referred to and removes the first blank from the holder E, and owing to the guidance of the fingers or arms

k^4 , Fig. 14, resting on the ribbed flanges k^2 , the finished blank is lifted out through the discharge-opening in the side of the casing K, 70
whence it may be transferred to the steaming-box. As the blank is transferred to the holder E it is bent, as above set forth, by the combined action of the cams k^3 and the ribs on the flanges k^2 , Fig. 15, and is introduced into 75
and held by the holder E in the bent form it should occupy in the complete barrel.

The two cutters c e , it will be seen on reference to Fig. 12, have their efficient cutting-faces on lines radiating from a central point, 80
(in this instance about the center of the rod G,) which bears the relation to the stave-blank that the center of the barrel should bear to each stave. By this means, and owing to the fact that the stave-blank is in the curved form 85
it must ultimately assume, the edges of each stave are cut or dressed to the exact bevel and to the taper and width toward each end necessary for a perfect fit in setting up the finished barrel. In other words, each stave-blank is 90
thus cut into a perfect segmental section of the barrel-body, and the sections are all alike, so that an accurate fit is insured.

We claim as our invention—

1. The combination of the frame of a barrel-stave machine and cutters mounted in 95
fixed bearings with an intermittently-reciprocating carriage having a series of holders for the stave-blanks, to be subjected to the action of said cutters successively for the dress- 100
ing of the staves during the movement of the carriage, and automatic feed mechanism, substantially as described, for intermittently transferring the blanks from one holder to another at right angles to the movement of 105
the carriage.

2. The combination of the frame of a barrel-stave machine, cutters, and a reciprocating carriage having holders for traversing the 110
blanks longitudinally under said cutters, with chamfering and crozing cutters, and automatic feed mechanism, substantially as described, for intermittently transferring the blanks from one holder to another and subjecting them to the action of the chamfering and crozing cut- 115
ters in the transfer.

3. The combination of the frame of a barrel-stave machine and a reciprocating carriage carrying a series of blank-holders, with inter- 120
mittently-operated feeding-arms, for transferring the blanks from one holder to another at right angles to the movement of the carriage, and a series of cutters, beneath which the blanks are successively traversed as follows: a planer, chamfering and crozing cut- 125
ters, concave and convex cutters, and edge-dressing cutters, all substantially as set forth.

4. In a barrel-stave machine, the combination of a holder constructed to hold the blank in a curved form, a holder for holding the 130
blank straight, and cutters for dressing the blank, with feed mechanism for transferring the blank from the straight to the curved holder, and bending devices, substantially as

described, for imparting the required curve to the blank in the transfer.

5 5. The combination of a fixed casing or box having guide-flanges for supporting the staves, and an intermittently-traversing carriage hav-
10 ing holders for the staves, with a series of rotary cutters and intermittent feeding-arms for transferring the staves at right angles to the movement of the carriage from one holder to the next on the said flanges, substantially as described.

15 6. The combination of the frame of a barrel-machine and the casing K, having supply and discharge openings for the blanks and guide-flanges, with an intermittently-reciprocating carriage having holders for the blanks, and intermittently-rotated feed-wheels for transferring the blanks on said flanges from one holder to another at right angles to the direction of motion of the carriage and while the latter is at rest.

25 7. The combination of a casing, K, having cams k^3 thereon, and ribbed flanges k^2 over the said cams, with a holder, E, and feeding-wheels for moving the stave-blank between the ribs and flanges onto the holder, substantially as described.

30 8. The combination of the frame of a barrel-stave machine and a series of cutters on a fixed portion of the frame with a reciprocating carriage having holders for the blanks, a casing for receiving and guiding the blanks, and an intermittent-feed mechanism for transferring the blanks from one holder to the next within the casing, substantially as set forth.

35 9. The combination of a traversing carriage provided with a series of holders, and having a central rod, G, and the casing K, having bearings, with a series of cutters and a sleeve, m' , mounted to turn in said bearings, and carrying feed-wheels m , for transferring the blanks from one holder to another, the said rod passing through said sleeve, substantially as set forth.

45 10. The combination of a carriage having a

series of holders for the stave-blanks, and intermittent-feed mechanism for transferring the blanks from one holder to another, with a rack connected to said carriage to impart motion thereto, but having a limited motion independent thereof, and devices, substantially as described, connecting the said rack with the feed mechanism.

55 11. The combination of a fixed frame carrying cutters, and an intermittently-reciprocating carriage having holders for the stave-blanks, with an intermittent-feed mechanism for transferring the blanks from one holder to another, and devices, substantially as described, connecting the carriage with feed-operating mechanism, whereby the blanks are transferred while the carriage is at rest.

65 12. The combination of a traversing carriage having holders for the stave-blanks, and feed devices for transferring the blanks, with an operating-rack, N, connected to the carriage, but having a limited motion independently thereof, and provided with a cam-groove, n' , and a lever controlled by said cam, and connected to said feeding devices, substantially as set forth.

75 13. The combination of a carriage having a series of holders for the stave-blanks, and having feed-wheels for transferring the blanks from one holder to another, with pawl-and-ratchet operating devices, a driving-pinion, L, and a sleeve, N, provided with a rack and cam-groove, and mounted to have a limited motion on said carriage, and a lever, M, connected to the pawl and controlled by said cam-groove, substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

MARIA E. BEASLEY.
EMIL M. HUGENTOBLE.

Witnesses:

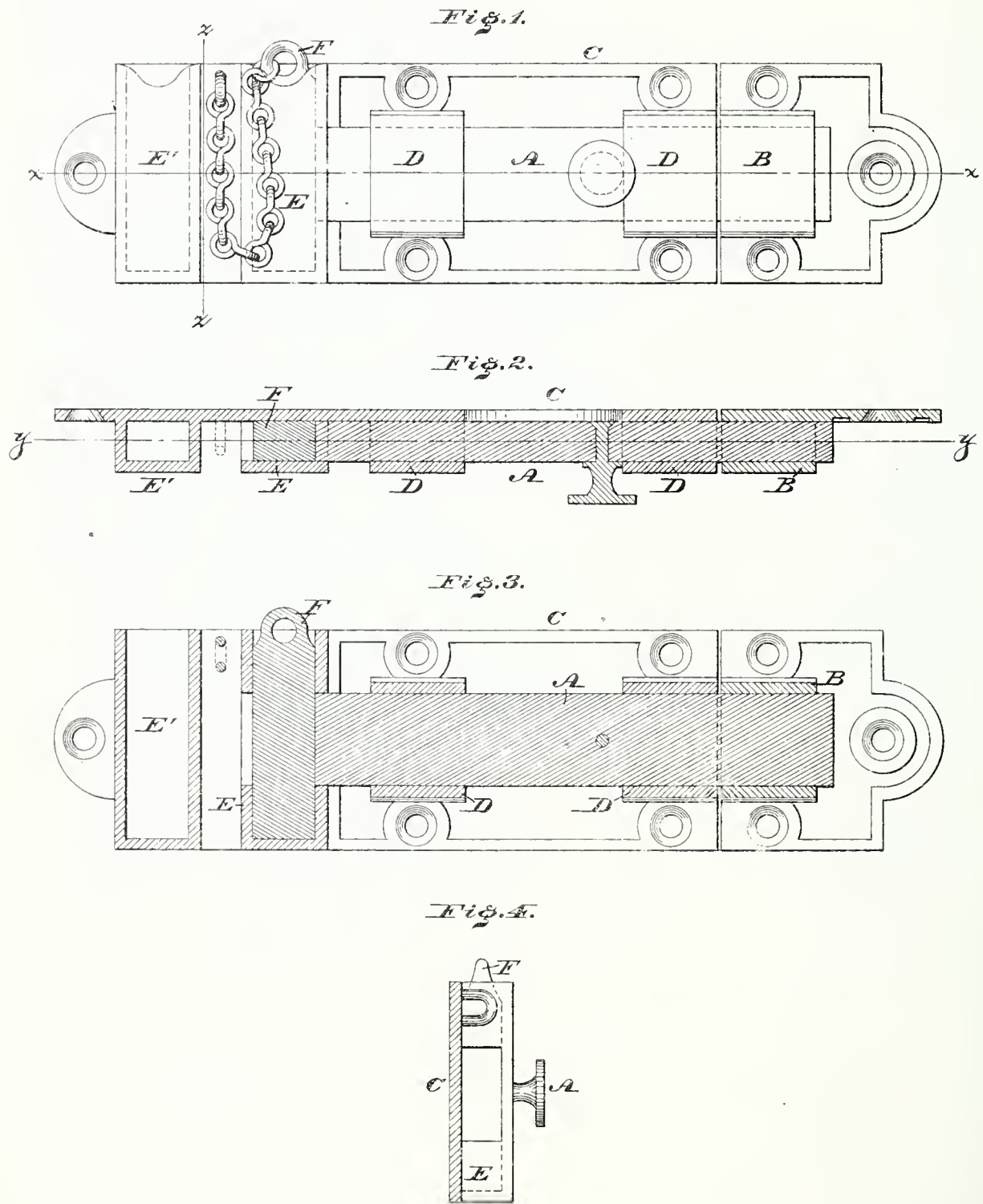
HARRY L. ASHENFELTER,
HENRY HOWSON, Jr.

(No Model.)

A. W. HARRIS.
BOLT FOR DOORS OR SHUTTERS.

No. 313,328.

Patented Mar. 3, 1885.



WITNESSES:

L. P. Grant,
H. F. Fischer

INVENTOR:

Annie W. Harris.
BY *John A. Fiedersheim*
ATTORNEY.

UNITED STATES PATENT OFFICE.

ANNIE W. HARRIS, OF PHILADELPHIA, PENNSYLVANIA.

BOLT FOR DOORS OR SHUTTERS.

SPECIFICATION forming part of Letters Patent No. 313,328, dated March 3, 1885.

Application filed December 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, ANNIE W. HARRIS, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Door and Shutter Bolts, which improvement is fully set forth in the following specification and accompanying drawings, in which—

10 Figure 1 represents a front view of a bolt embodying my invention. Fig. 2 represents a horizontal section in line *x x*, Fig. 1. Fig. 3 represents a vertical section in line *y y*, Fig. 2. Fig. 4 represents a vertical section in line
15 *z z*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a bolt constructed and operating as hereinafter fully set forth
20 and definitely claimed.

Referring to the drawings, A represents a bolt, B the keeper thereof, and C the back plate, to which the guides D of the bolt are secured.

25 E E' represent two parallel pockets secured to the plate C at a right angle to the bolt A, both pockets being open at top, the pocket E having openings in its sides, so that the bolt A may pass therethrough. The pockets are
30 adapted to receive a bolt, F, which is provided with a suitable chain, so as to be prevented from being lost. When the bolt A is shot into the keeper, the bolt F is inserted into

the pocket E, and projects across the path of the bolt A, so that the inner end of the latter
35 is at the side of the bolt F, and is adapted to abut thereagainst, whereby the bolt A is prevented from being withdrawn from the keeper, and thus it remains controlled by said bolt F
40 until the latter is properly removed, the bolt A then being adapted to be shot back and in its passage moved through the openings in the sides of the pocket E, the pocket E' then limiting the return motion of the bolt A, and
45 also serving as a receptacle for the bolt F, the latter thus being nicely retained in inoperative position without interfering with the subsequent advance of the bolt A, which advance being accomplished, said bolt F is removed from the pockets E' and inserted in the
50 pocket E, thus again controlling the bolt A.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The bolt A, in combination with the bolt F
55 and the parallel pockets E and E', said pocket E having side openings which permit the passage of the bolt A, and a top opening to receive the bolt F, said pockets E and E' being connected with the back plate, C, all the
60 parts being constructed and operating as herein set forth.

ANNIE W. HARRIS.

Witnesses:

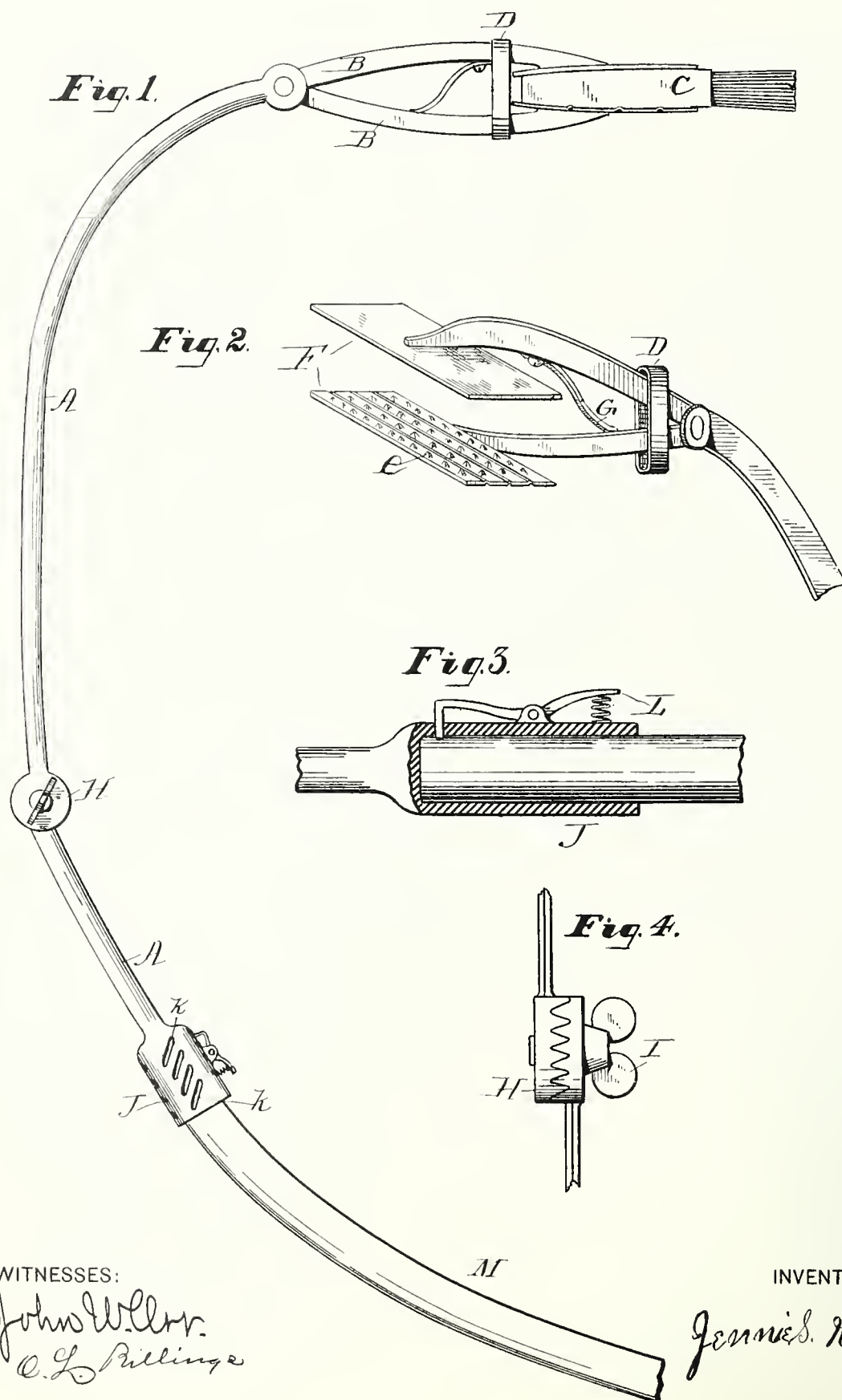
JOHN A. WIEDERSHEIM,
A. P. GRANT.

(No Model.)

J. S. RUTAN.
WINDOW CLEANER.

No. 322,070.

Patented July 14, 1885.



WITNESSES:

John W. Orr.
C. L. Billings.

INVENTOR

J. S. Rutan,

UNITED STATES PATENT OFFICE.

JENNIE S. RUTAN, OF PHILADELPHIA, PENNSYLVANIA.

WINDOW-CLEANER.

SPECIFICATION forming part of Letters Patent No. 322,070, dated July 14, 1885.

Application filed September 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, JENNIE S. RUTAN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Window-Cleaner, of which the following is a specification.

My invention relates to a newly devised apparatus for reaching and cleaning the outer side of windows, especially those of upper stories in high houses, and so avoid the danger and exposure incurred by those who are obliged to climb outside on window-sills, as the machine is so constructed that by means of its curved handle every part of the weather-surface of the glass can be easily reached while the operator stands safely inside. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents a side view of the device fitted up for use. Fig. 2 shows the clamp-head piece thrown open, showing the roughened inner surface. Fig. 3 represents the socket-joint connecting the two portions of the handle. Fig. 4 is a front view of the joint in the iron part of the handle, by means of which the degree of curvature can be increased or diminished, as required in operating.

Similar letters refer to similar parts throughout the several views.

A A represent the iron portion of the handle; B B, the two halves of the clamp, securing the brush C by means of the ring D, slipped forward for that purpose. At E is represented the roughened inner surface of these jaws, designed to assist the ring in retaining the brush in position.

F are the jaws, thrown apart by means of the spring G when the ring is slipped back.

H is a joint regulated by the thumb-screw I, placed at and connecting the lower third with the upper two-thirds of the iron part of the handle, and used for the purpose of straightening the same and converting the device into an inside window-cleaner.

J is a socket-joint connecting the wooden and iron portions of the handle. K K are perforations in the iron socket, through one of which the spring-lock L plays into the wooden portion inside.

M represents the wooden part of the handle, curved to correspond with the curve of the iron part above the joint.

The apparatus is constructed of wood and malleable iron, its length varying from four feet upward, as required by the varying height of windows. The lower part of the handle is made of any pliable wood, preferably ash or hickory. The upper part and head-piece are malleable iron. The two lengths are connected by means of a socket-joint, J. This socket is of iron, two and one-half inches deep, and perforated. Through one of the perforations a spring-lock plays against or into the head of the wooden portion of the handle, which fits closely inside. This is designed to render the union more secure and to admit of separation when necessary. The entire length of handle is subject to a uniform curve, being ten inches from a parallel surface at the deepest point in the center, resembling a lengthened arm of the human window-washer when curved for such work. This curve may be increased or lessened, if required in operating, by means of the shallow-toothed joint H, rendered movable by the thumb-screw I. In manufacturing these handles, however, I find it advisable sometimes to use other methods for attaining the necessary curve, and do not confine myself to the one described.

The head-piece consists of two flat jaws, F, roughened on the inner surface by means of the raised lines and teeth shown at E. The lower jaw is riveted directly to the handle, the upper four inches of which is bent smartly forward, making a right angle. The upper jaw and short neck are molded in one piece and united to the lower at the angle by means of a movable dovetailed joint.

Between the two pieces B B, which constitute the neck, a flat steel spring, G, plays, one end of which is riveted to the one of said pieces B, while the other end plays against the other piece B. This throws the jaws widely asunder when the clasp is removed.

The clasp D is an iron ring that plays between the movable joint and the jaws over the neck-pieces B B, the degree of closure depending on the distance this ring is pushed forward. Articles varying in thickness from

a brush to a small chamois-skin can so be held securely. The brush especially designed for this use is shown in the drawings.

5 In using this device the operator, who stands inside the window, raises the lower sash far enough to thrust out and up the machine, the curved handle bringing the head-piece and its contained washer closely against the glass. This, when the handle is moved
10 up and down, produces enough friction to speedily remove all dust and dirt and leave a finely-polished surface.

15 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a window-cleaner, the combination, with the head-piece, of a handle consisting of two portions united by an adjustable lock-joint, each portion of the handle being curved, substantially as described. 20

2. In a window-cleaner, the combination, with the head-piece, of the curved and jointed metallic handle A A, the lower portion of which is provided with a socket, J, to receive an additional wooden handle, substantially as
25 described.

JENNIE S. RUTAN.

Witnesses:

SARAH E. EDWARDS,

JOHN S. NELSON.

(No Model.)

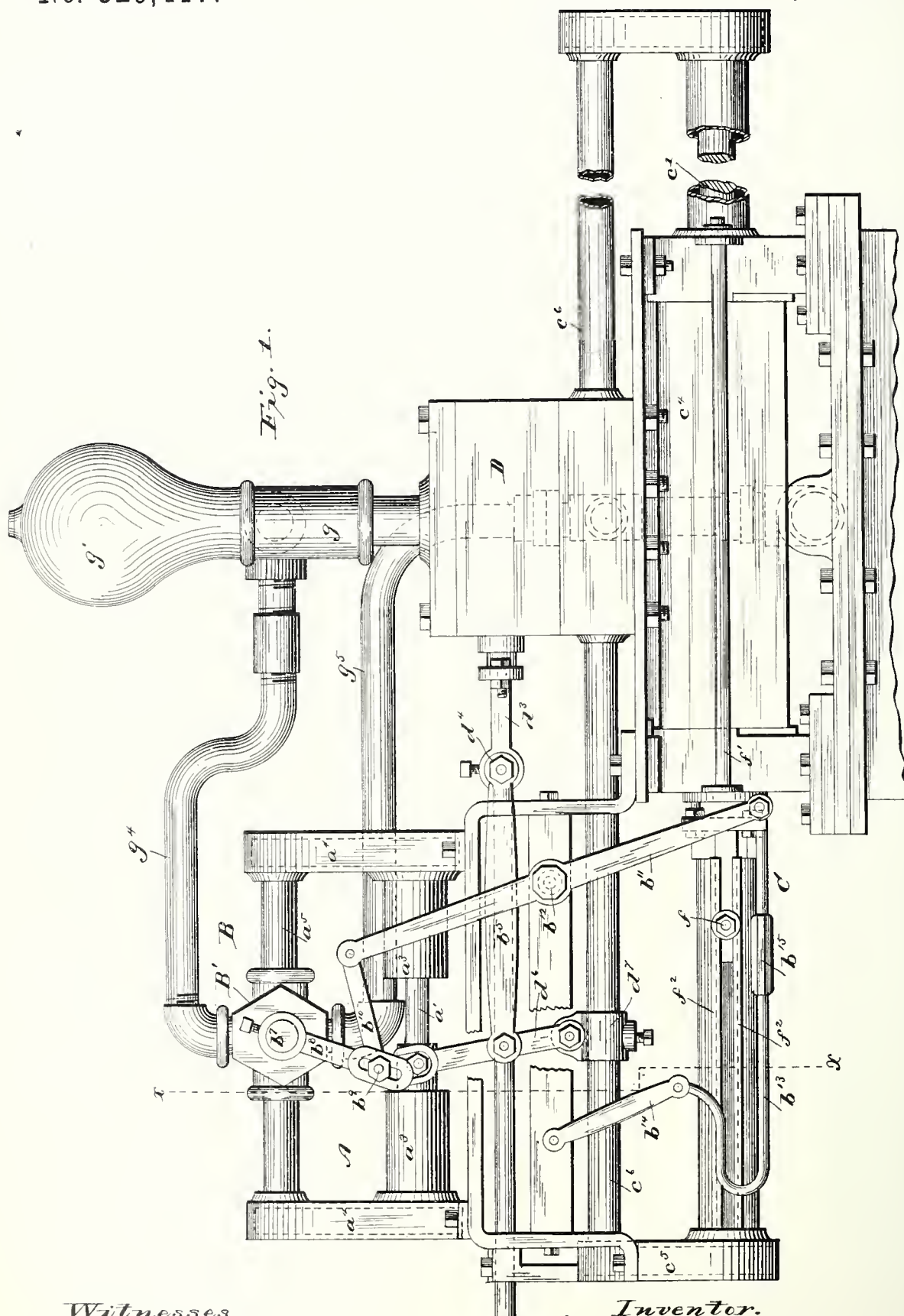
4 Sheets—Sheet 1.

L. B. TUBBS.

CUT-OFF FOR HYDRAULIC AND OTHER ENGINES.

No. 329,417.

Patented Oct. 27, 1885.



Witnesses.
Chas. R. Burr
A. J. Stewart.

Inventor.
Lily B. Tubbs
by Church & Church
Her Attorneys.

(No Model.)

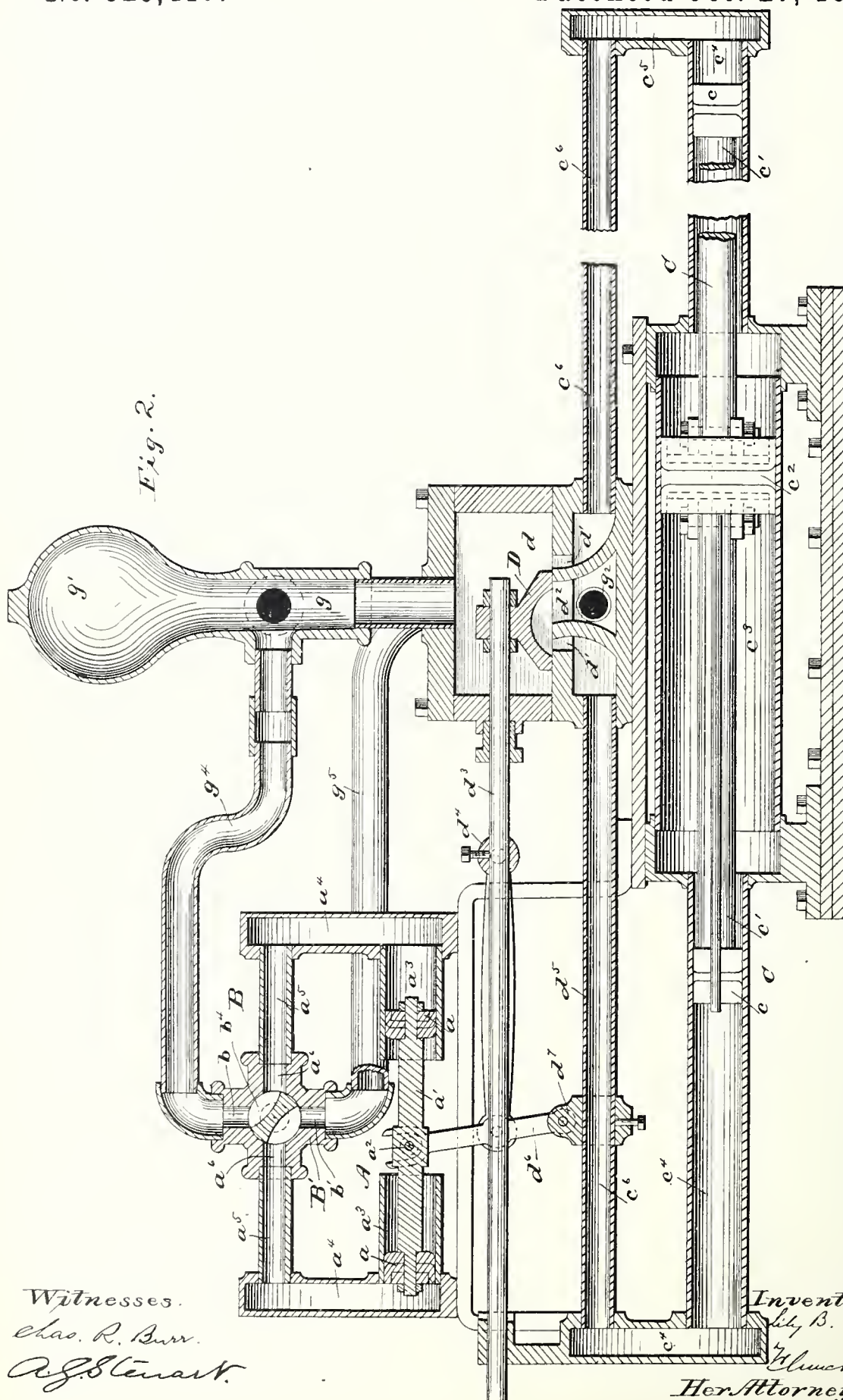
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L. B. TUBBS.

CUT-OFF FOR HYDRAULIC AND OTHER ENGINES.

No. 329,417.

Patented Oct. 27, 1885.



(No Model.)

4 Sheets—Sheet 3.

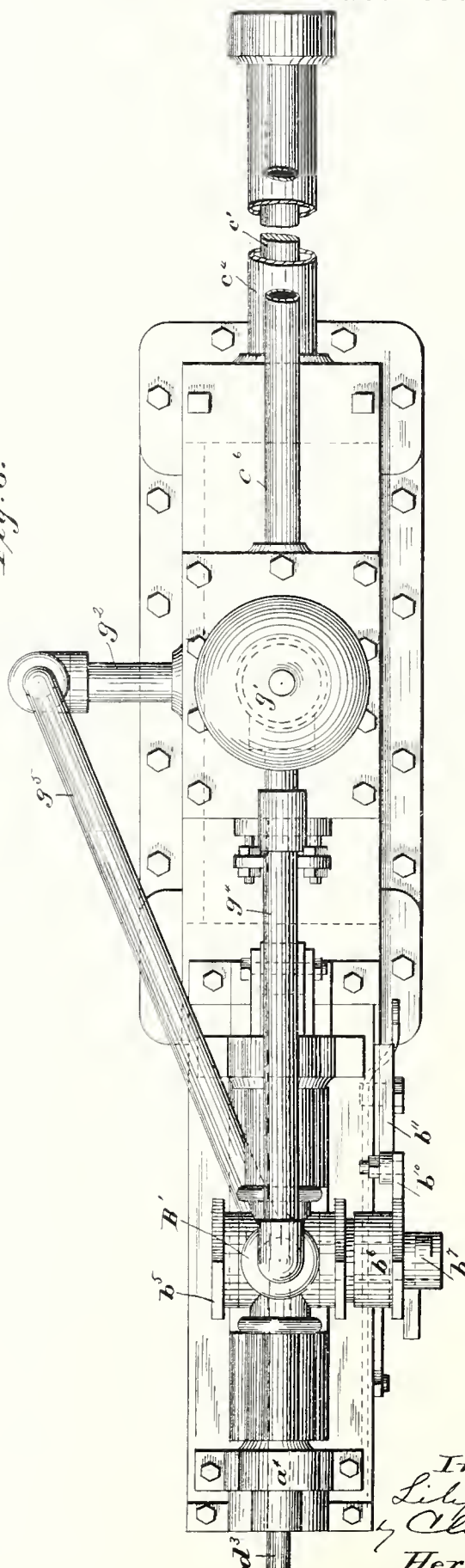
L. B. TUBBS.

CUT-OFF FOR HYDRAULIC AND OTHER ENGINES.

No. 329,417.

Patented Oct. 27, 1885.

Fig. 3.



Witnesses.
Chas R. Burr.
A. J. Stewart.

Inventor.
Lily B. Tubbs
Clum & Clum
Her Attorneys.

(No Model.)

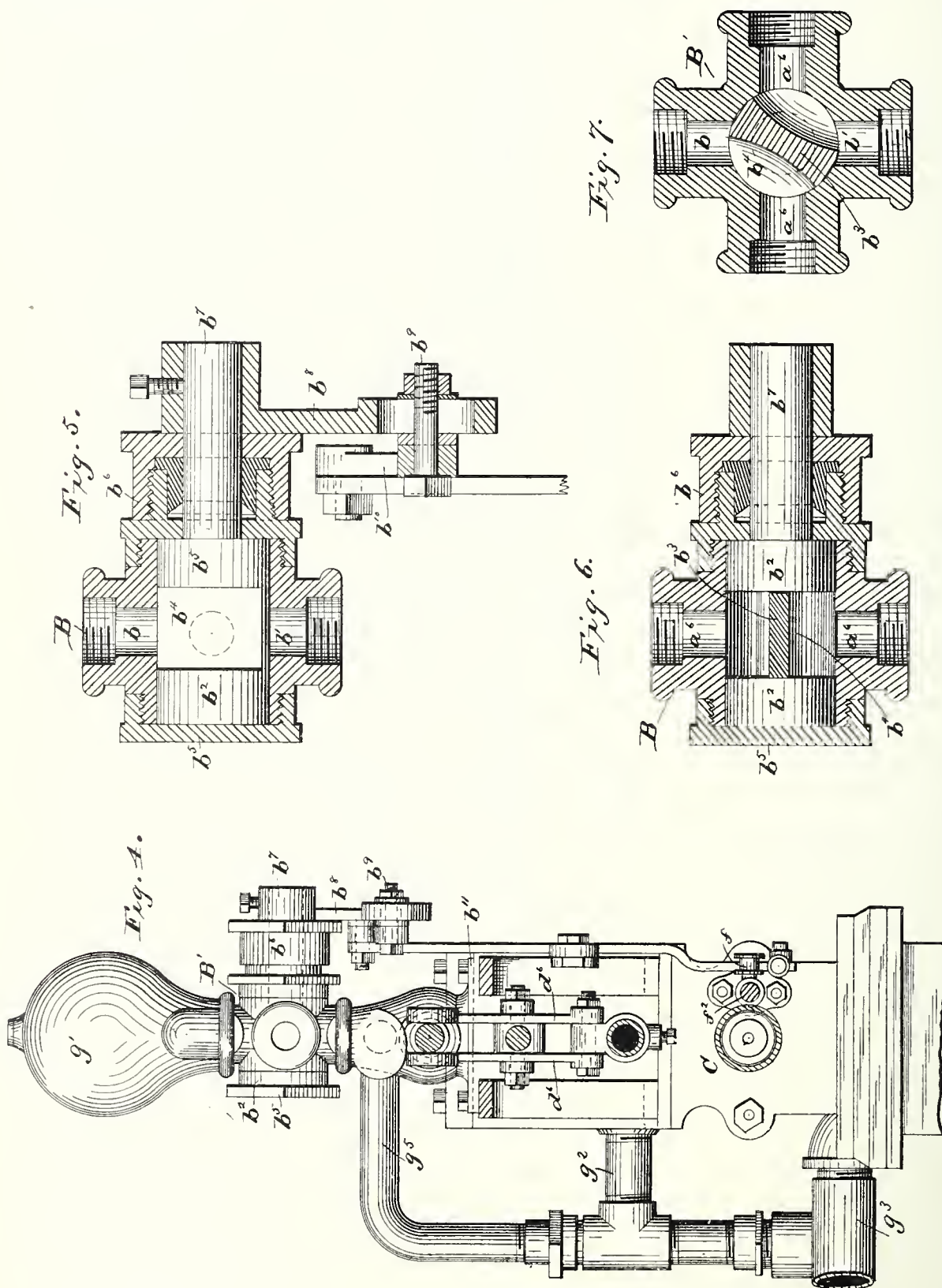
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L. B. TUBBS.

CUT-OFF FOR HYDRAULIC AND OTHER ENGINES.

No. 329,417.

Patented Oct. 27, 1885.



Witnesses.
Chas R. Burr.
A. J. Stewart.

Inventor
L. B. Tubbs
by Church & Church
Her Attorneys.

UNITED STATES PATENT OFFICE.

LILY B. TUBBS, OF PHILADELPHIA, PENNSYLVANIA.

CUT-OFF FOR HYDRAULIC AND OTHER ENGINES.

SPECIFICATION forming part of Letters Patent No. 329,417, dated October 27, 1885.

Application filed February 4, 1885. Serial No. 154,870. (No model.)

To all whom it may concern:

Be it known that I, LILY B. TUBBS, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Cut-Offs for Hydraulic and other Engines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

The present invention relates more especially to that class of hydraulic engines or motors wherein a column or body of liquid under pressure is caused to act intermittingly, or at predetermined intervals, upon a piston or series of pistons or analogous devices to effect the desired reciprocating motion of the driver or other part from whence the power is communicated to the mechanism as desired; and it consists, essentially, in a new system or combination and arrangement of mechanism for effecting automatically the movements of the valve for controlling the passage or delivery of the motive power to the operating piston or pistons, all as herein-after more fully described, and pointed out in the claims.

As is well known to those familiar with the inelastic properties of liquids, it is impossible to employ any valve-operating mechanism in this class of motors which, being actuated by the piston either directly or indirectly, depends upon the prolonged or continued action of the fluid after the induction-passage has been closed, as is the case with most valve mechanisms used in connection with motors employing elastic fluids. Attempts have been made to overcome this difficulty by the interposition or addition of springs and weights at some point between the piston and valve, designed to furnish the requisite elasticity or prolonged action, and thereby in a measure compensate for or supply the place of the elasticity wanting in the motive fluid. This is necessary in order that the valve may at the proper time be given a quick movement in advance of the piston, and the means heretofore usually employed have been either springs or weights, which being connected in any suitable manner, as by an arm or lever acted upon by the

piston during its stroke, are compressed or raised, and the power thus stored is at the proper time applied to the valve mechanism, causing a sudden shock and quick movement of the valve, whereby the supply of fluid is cut off from one side and admitted to the other side of the piston. The defects of such a system are both numerous and obvious.

The devices employed for producing the requisite throw of the valve are not only unreliable in themselves, involving the use of springs whose tension is weakened by use and varied by temperature, and which are liable to be clogged by rust and dirt and in various ways interfered with and rendered uncertain when delicacy and promptness of action are most essential, or weights whose connected parts are in like manner liable to be impeded or their action interfered with. In addition to these structural weaknesses, there are certain inherent defects common to both classes of valve-operating mechanisms, the one employing springs and the other weights, arising in part from the fact that the valve-actuating lever, or the part acted upon by the springs or weights, must at times be free to move independently of the driver, and when being moved from side to side is positively actuated in one direction only; hence the valve is not at all times under control, but is liable to become misplaced and be rendered inoperative, as by the rebound of the lever or the sticking of the parts, such as would prevent the valve from uncovering the inlet and outlet ports, and at the proper times.

Another defective feature of the systems heretofore in use is the absence of any means for automatically adjusting or controlling the power of the valve-operating mechanism relative to the pressure of the fluid as delivered to the motor. Thus where springs or weights are employed to throw the valve their force should be so adjusted as to overcome the friction of the parts and properly place and hold the valve; but if the pressure in the valve-chest varies and the friction is correspondingly increased or diminished it necessitates a readjustment of the parts. Otherwise the movement of the valve would become irregular and the action of the motor be correspondingly interfered with or interrupted altogether.

While the present invention is designed and calculated to overcome the defects enumerated and others apparent to the skilled mechanic, and may for that reason be properly classed
 5 as an improvement upon prior systems of valve-operating mechanisms for hydraulic motors, I do not wish to be limited to the particular embodiment shown, for the reason that I believe I have introduced a new and more
 10 perfect system of valve-regulation based upon the novel application of hydraulic pressure to the valve-operating mechanism.

In the accompanying drawings, Figure 1 is a side elevation, Fig. 2 a longitudinal section,
 15 and Fig. 3 a plan view, of a pump and hydraulic motor, showing the application of a valve-operating mechanism embodying my present invention. Fig. 4 is a transverse section on the line *x x* of Fig. 1. Figs. 5, 6, and
 20 7 are detail views of the valve for controlling the passages leading to the supplemental motor for actuating the valve.

Similar letters of reference in the several figures indicate like parts.

25 As shown in the drawings, my invention contemplates the use of a supplemental hydraulic motor, A, the admission and escape of the fluid being regulated or controlled by a valve, B, which latter is set by a part moving
 30 in unison with the piston of the prime motor C. The supplemental motor A is connected to and actuates the rod of the valve D, which latter governs the admission and escape of the liquid in the prime motor C. These four parts
 35 constitute in effect the essential elements of my improved valve-operating mechanism as applied to a reciprocating motor, and as is obvious the special form and construction of the several parts and their intermediate connections can be varied indefinitely.
 40

Having thus outlined what I deem the essential features of my invention, I will proceed to describe in detail the mechanism in which I have illustrated its embodiment, said mechanism having been practically tested and found
 45 well adapted for the purposes. The prime motor C is in this instance provided with two pistons, *c c*, fastened to the opposite ends of a piston-rod, *c'*, which latter carries a piston, *c''*, working in a cylinder, *c''*, the said piston and cylinder, with suitable valves and connections (not shown) constituting a force-pump,
 50 with which the prime motor C is shown connected, although, as is obvious, other mechanisms or devices or other kinds and constructions of pumps might be substituted for and arranged to be driven by the prime motor the special pump shown forming no part of my
 55 present invention, being in all material respects the same as that described in the application No. 101,427, filed by N. J. Tubbs, July 20, 1883. The pistons *c c* work in cylinders *c'* *c'*, whose outer ends communicate through heads *c'*
 60 *c'* and pipes *c'* *c'* with opposite ends of the valve-chest *d*. The valve-chest *d* is provided with ports *d'* *d'* *d''*, the latter, *d''*, communicating

with the discharge-pipe. A slide-valve, D, controlling the ports *d'* *d'* *d''*, is located within the valve-chest *d*, and is actuated through the medium of a rod, *d''*, passing through a stuffing-box and supported in suitable guides. Ad-
 70 justably secured to the rod *d''* is a collar, *d'*, and to the latter is pivoted one end of a pair of links, *b''*, the opposite ends being in like manner fastened to a pair of links or levers, *b''*.
 75 The upper ends of these levers *b''* are slotted or fureated, and their lower ends are pivotally secured to a block or collar, *d'*, adjustably fastened to one of the pipes *c'* or other part of the frame. The supplemental motor
 80 A is provided with the usual piston or pistons, *a*, and rod *a'*, the latter carrying pins or studs *a''*, engaging the slotted or fureated ends of the levers *b''*. The pistons work in cylinders *a'*, whose outer ends connect through heads *a'*
 85 and pipes *a'* with diametrically-opposite branches *a'* of the four-way coupling B', the remaining branches of said coupling being connected, the one, *b*, with the fluid-supply, and the other, *b'*, with the eduction or exhaust
 90 pipe. Within the coupling B' is located an oscillating valve, B, having a cylindrical bearing, *b''*, at either end, and a central longitudinal portion or web, *b''*, whose outer surface is concentric with and fits accurately within the
 95 chamber *b''*, extending transversely through the center of the coupling B'. One end of the valve-chamber *b''* is closed by a tight-fitting screw-cap, *b''*, and the other end is provided with a stuffing-box, *b''*, through which projects
 100 the valve-stem *b''*. To this valve-stem *b''* is fastened an arm, *b''*, provided with a slotted portion, in which is adjustably secured a pin or bolt, *b''*, forming a pivot to receive the end of a link, *b''*.
 105 The opposite end of this link is attached to a lever, *b''*, pivoted to the frame, as at *b''*, and connected at its lower end to an adjustable bar or link, *b''*, whose other extremity is supported by a link, *b''*. A roller
 110 or pin, *f*, connected to and moving in unison with the pistons of the prime motor C, (in the present instance this roller is carried by a rod, *f'*, supported in guideways *f''*, secured to the side of the cylinder *c'*, and passing through a
 115 stuffing-box is attached to the pump-piston *c''*,) reciprocates and alternately makes contact with the lever *b''* and the opposite end of the bar or link *b''*, thereby forcing the lever *b''* first in one direction and then in the other
 120 to actuate the valve B.

The supply and discharge pipes for operating the prime motor and the mode of transmitting the power from the supply-station may be similar to that disclosed in the application
 125 of N. J. Tubbs, before referred to—that is to say, the fluid is delivered under pressure to the valve-chest of the prime motor by a pipe attached to the connection *g* above the valve-chest, an air-chamber, *g'*, being preferably lo-
 130 cated at this point, the pressure being produced through the medium of an accumulator, an elevated reservoir, or a force-pump, termed

a "transmitter," while the exhaust from the prime motor may be by a pipe, g^2 , connected to a return-pipe, or, as in the present instance, to the discharge-pipe g^3 of the pump. The supplemental motor A receives its supply from the same head as the prime motor through a branch-pipe, g^4 , extending from the connection g to the induction-branch b of the valve-coupling B'; hence it follows that the pressure brought to bear upon the supplemental motor will at all times be the same as that within the valve-chest. The eduction or exhaust branch b' of the coupling B' may, if desired, be connected by a pipe, g^5 , with the exhaust of the prime motor.

The operation of my improved valve mechanism is as follows: The bar or link b^{13} having been adjusted by means of the nut b^{15} , the said bar or link being made in two parts, screw-threaded into the nut b^{15} , as is well understood, and the pin or bolt b^9 set at the proper point, whereby the length of the stroke or point of cut-off is determined, the liquid is admitted under pressure through the main supply-pipe, and flowing into the valve-chest d makes its way through one of the induction-ports into cylinder c^4 , where the pressure is applied to the piston c to drive the prime motor in one direction. The valve being connected directly to the piston of the supplemental motor, and being held thereby, must at all times retain a specific relation to the supplemental motor; hence the position of the valve D and the direction of the movement first given to the prime motor are determined by the position occupied at the time by the piston of the supplemental motor. In like manner the position of the supplemental motor is determined by the direction of the valve B, and the latter by the lever b^{11} . When, therefore, the prime motor is started, the direction of its movement is controlled by the position of the valve, and the position of the valve by that of the supplemental motor. It will be observed, moreover, that the position of the supplemental motor is governed by the valve B and the latter by the lever b^{11} . If, now, the prime motor when started is at the beginning of its stroke, the pin will be pressed against the lever b^{11} or (at the opposite end of the stroke) the bar b^{13} , thereby turning the valve B so as to admit the fluid to one end of the piston of the supplemental motor, forcing and holding the piston and the valve D connected thereto at the extreme end of its stroke. Just before the stroke of the piston of the prime motor is completed the pin strikes the lever (or the bar) and reverses the valve B. As soon as this is accomplished the supplemental motor is set in motion, carrying with it the valve D, and thereby reversing the direction of the prime motor, which operations are repeated at each end of the stroke, producing a regular, positive, and continuous motion of the prime motor.

It will be observed that the prime motor

is merely utilized to set the valve for the supplemental motor, which operation in no wise interferes with or occasions an interruption in the movement of the former. Moreover, when the prime motor has once set the valve of the supplemental motor, the latter is placed under the influence of the liquid-supply and continues its action entirely independent of the prime motor until the valve D has been properly placed. By adjusting the length of the connection b^{13} and the position of the pin b^9 on the valve-lever the valve B can be actuated at any point during the reciprocation of the prime motor.

Although the supplemental motor might be supplied with fluid from another source than that employed to drive the prime motor, I prefer that both said motors should be connected to the same supply, for the reason that the pressure is thereby equalized, the power of the supplemental motor being increased in the same ratio as the pressure upon the valve of the prime motor.

The action of this valve mechanism is simple, easy, positive, and reliable. It starts at any point, and is self setting and regulating. So long as a sufficient pressure is maintained in the supply-pipe to actuate the prime motor the valve mechanism will be set in motion and continue to act irrespective of any change in the pressure. There are no parts depending upon gravity or compression, and the valve for controlling the induction and exhaust ports of the prime motor is moved positively and held firmly in place, hence cannot be jolted or misplaced by the rebounding or failure to work of the actuating-lever.

As before mentioned, I do not desire to be limited to the precise form and construction of the valves, motors, and connections, except as specified in the claims, as other equivalent forms may be substituted in whole or in part for those herein described and illustrated without departing from the spirit of my present invention.

I claim—

1. In combination with the prime motor C, having pistons c , piston-rod c^3 , and valve D, and the supplemental motor A, having pistons a and rod a' , the levers d^6 , connected at one end to the rod a' , and links b^5 , connected at opposite ends to the lever d^6 and valve-rod d^3 , substantially as described.

2. In combination with the prime and supplemental motors C and A, the slide-valve D, controlling flow of liquid in prime motor, rod d^3 , links b^5 , levers d^6 , oscillating valve B, controlling flow of liquid in supplemental motor, arm b^3 , link b^{10} , lever b^{11} , bar b^{13} , link b^{14} , and pin f , carried by rod f' , and actuated by piston of prime motor, substantially as described.

3. In combination with the cylinders and pistons of the prime motor C, the slide-valve D, supplemental motor A, and connections,

such as described, intermediate the supplemental motor and slide-valve, the oscillating valve B, actuated by the prime motor and governing the inlet and exhaust of the supplemental motor, said valves D and B being
5 connected to the same supply-pipe, substantially as described, whereby when the valve

B is reversed to admit the liquid to the supplemental motor the pressure on the valve D is temporarily relieved.

LILY B. TUBBS.

Witnesses:

THOMAS J. BEWLEY,
THOS. C. BARR.

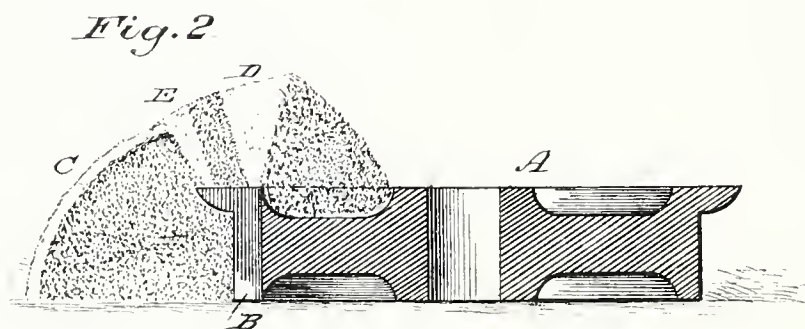
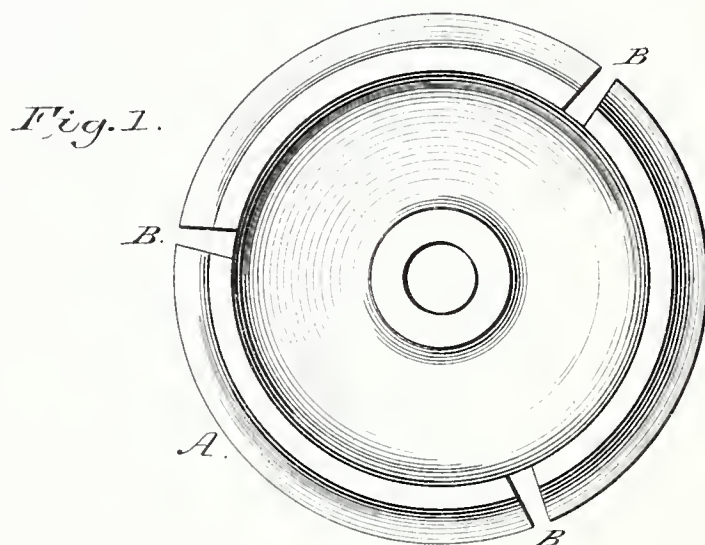
(No Model.)

S. L. SINCLAIR.

METHOD OF FILLING THE RECESSES IN THE TREAD OF CAR WHEELS.

No. 315,080.

Patented Apr. 7, 1885.



WITNESSES:

Fred. L. Dietrich,
Jos. A. Ryan.

INVENTOR.

Susan L. Sinclair

By J. J. Johnston ATTORNEYS.

UNITED STATES PATENT OFFICE.

SUSAN L. SINCLAIR, OF ALLEGHENY, PENNSYLVANIA.

METHOD OF FILLING THE RECESSES IN THE TREAD OF CAR-WHEELS.

SPECIFICATION forming part of Letters Patent No. 315,080, dated April 7, 1885.

Application filed December 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, SUSAN L. SINCLAIR, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Method of Filling the Recesses in the Tread of Car-Wheels; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to ear-wheels, and is an improvement upon the invention of my father, Cornelius Kingsland, for which Letters Patent of the United States No. 72,405, dated December 17, 1867, were granted him; and it consists in constructing car-wheels in all respects as described in the schedule annexed to and forming part of said Letters Patent, and filling the "recesses marked O" in the manner and by the means hereinafter described and claimed.

In the casting of ear-wheels, as described in the aforesaid Letters Patent, the tread of the wheel is hardened in the process of easting through the medium of a "chill." This hardening process of said tread changes the character of that portion of the metal to the depth that is chilled, and in all means heretofore employed for filling said recesses the filled portion is liable to chip out or wear uneven with the balance of the tread of the wheel.

Figure 1 is a side elevation of the ear-wheel representing recesses in the flange and tread thereof. Fig. 2 is a transverse vertical section of the wheel and mold employed in the operation of filling said recesses.

To obviate and overcome these disadvantages, I fill said recesses in the following manner: I take molten pig metal when at a very high white heat and in a very thin fluid condition and treat it with pulverized iron ore, salt, and lime, using about eighty parts of pulverized iron ore reduced to a fine powder, about ten parts of salt, and about ten parts of lime. These ingredients are thoroughly mixed together, so as to form as nearly as possible a homogeneous mass, which is subsequently heated to about 800° or 1,000° Fahrenheit. With every hundred weight of molten pig metal I mix ten pounds of said heated mass, taking care to thoroughly stir it in and through the molten metal.

After the wheel has been cast with the recesses B, the mold is prepared as indicated in

the accompanying drawings, which will be readily understood by the skillful molder when it is stated that the mold is formed for the purpose of "knitting the iron" in said recesses.

In the drawings, (see Fig. 1,) A represents the ear-wheel; B, the recesses in the ear-wheel; C, the sand or mold, (see Fig. 2;) D, the pouring-sprue, and E the outflow sprue or gate.

The sand used in forming the mold is dampened with an alkali solution—such as water, with sal-soda dissolved therein. This will cause the molten metal poured into and knit in said recesses to harden, and will retain the hardened condition of the metal in the tread of the wheel adjoining said mass. After the metal poured into the recess has sufficiently cooled off the mold is removed from the wheel, and that portion of the tread made by a grinding or dressing process to correspond with the balance of the tread by any of the means known to the art.

Treating the molten metal as herein described, it will be purified and assume the same character and texture as that forming the chilled tread of the wheel, and will knit it in the tread of the wheel, as herein described. The sand of the mold being treated as set forth will prevent the metal poured into the said recesses from being changed in its character by the knitting process, it being a fact well understood by the skillful molder that from some unexplained and unexplainable fact in the operation of knitting the metal employed is materially changed in its character and texture.

Having thus described my improvement, what I claim is—

The method hereinbefore described for filling the recesses marked B, consisting of treating the molten metal with the compound herein specified, preparing the material of the mold with the solution, as specified, and filling and knitting the said purified metal in said recess, substantially as specified.

In testimony whereof I have hereunto set my hand this 3d day of July, A. D. 1884.

SUSAN L. SINCLAIR.

Witnesses:

A. C. JOHNSTON,
C. S. JOHNSTON.

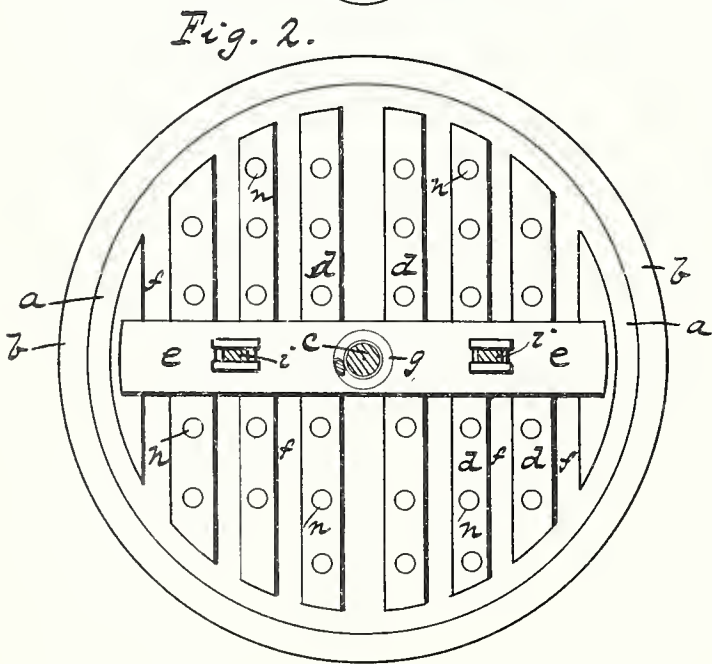
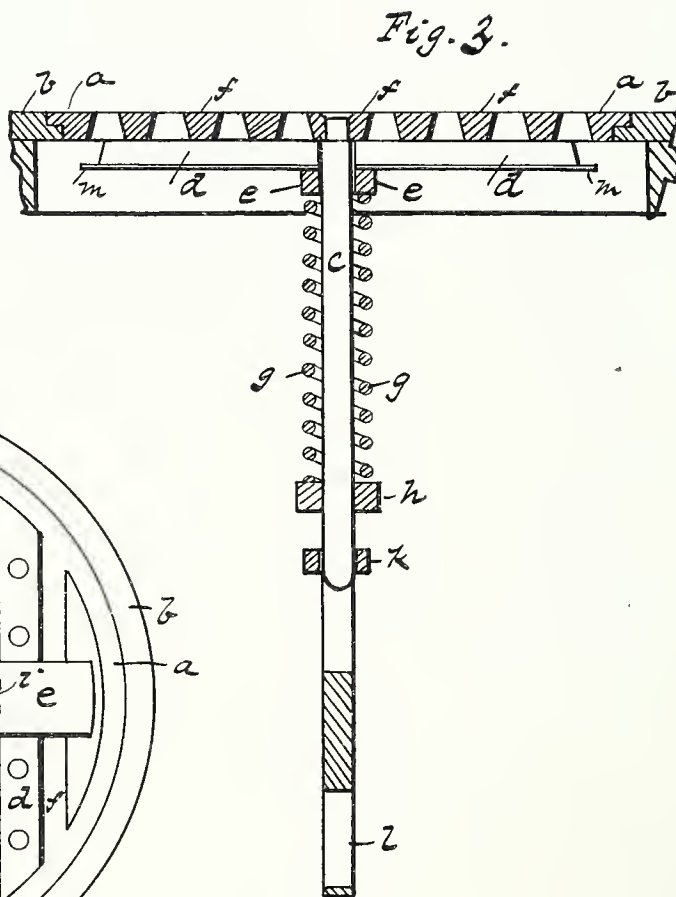
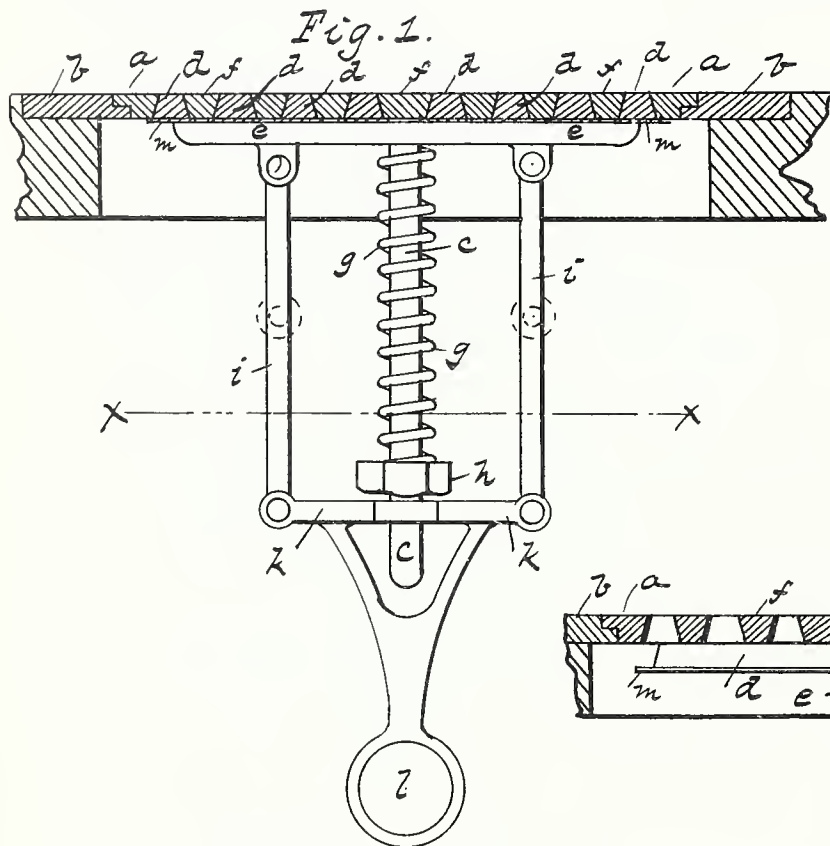


(No Model.)

E. MARATTA.
COAL VAULT GRATING.

No. 350,757.

Patented Oct. 12, 1886.



Witnesses:
J. B. Harrison.
James J. Sheehy.

Inventor:
Ella Maratta
Per. C. D. Lewis
Attorney.

UNITED STATES PATENT OFFICE.

ELLA MARATTA, OF PITTSBURG, PENNSYLVANIA.

COAL-VAULT GRATING.

SPECIFICATION forming part of Letters Patent No. 350,757, dated October 12, 1886.

Application filed May 29, 1886. Serial No. 203,674. (No model.)

To all whom it may concern:

Be it known that I, ELLA MARATTA, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Coal-Vault Gratings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in coal-vault gratings, the object being to provide a grating that may be opened or closed at will. This I accomplish by placing a series of bars in the intervening slots or openings of the grating, together with certain other details of construction and combination of parts, as will be more fully described hereinafter.

In the accompanying drawings, Figure 1 is a side elevation of my improved coal-vault grating, partly shown in section, the better to show its working parts. Fig. 2 is a sectional plan view of the same on the line X X, as seen from the under side. Fig. 3 is a sectional elevation of my improved grating, showing the same open for ventilation.

To put my invention into practice, I provide a circular grating, *a*, supported by a grooved ring, *b*, which differs in no essential feature from those now in common use. At the center of this grating *a*, I firmly secure a downwardly-projecting post, *c*, which may either be integral with or attached to the grating. I now provide a number of parallel bars, *d*, attached together by a cross-piece, *e*, and constructed to fit neatly between the bars *f* of the grating *a*. The sides of these bars *d*, together with those of the grating *a*, I prefer to have slightly tapering, which allows the same to be easily separated from each other. A strong spiral spring, *g*, placed about the post *c*, bearing against the cross-piece *e* at one end, and against a nut, *h*, secured to the post *c*, at the other, serves to keep the bars *d* in place. Attached to the cross-bar *e* are two downwardly-projecting rods, *i*, secured together a short distance below the nut *h* by a horizontal bar, *k*, to which a handle, *l*, is attached. About the lower periphery of each of the movable

bars *d* is formed an outwardly-extending flange, *m*, which further prevents water or other substance from passing through the grating *a*. Small circular pieces of glass *n* may be set in the bars *d*, which, when the grating is closed, allows the light to enter the vault over which the grating is placed, and a hook attached to the same, for the purpose of locking the grating.

When it is desired to open the grating *a* for the purpose of ventilation, by means of the handle *l* the bars *d* are entirely withdrawn from the grating *a* and revolved at right angles to their former position, which operation leaves a series of square openings formed by the two sets of bars *d* and *f*.

If the openings of the grating *a* are to be closed, the movable bars *d* are revolved back in the same manner as before, and, actuated by the spiral spring *g*, are forced tightly between the bars *f* of the grating *a*.

I am aware that a vault grating has been formed of parallel bars, the spaces between which are greater at the top than at the bottom, and that wedge-shaped pieces of wood have been inserted in said openings from above downwardly, so that when it is desirable to open any of the slots thus closed the said strips may be driven out of the slots from below upwardly.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a grating for vaults, the combination consisting of the parallel bars *d*, attached together and constructed to fit neatly in the openings of the grating *a*, the vertical post *c*, secured to the grating *a*, the spiral spring *g*, and nut *h*, and a means whereby the movable bars *d* may be removed from the openings formed in the grating *a* and revolved in such a manner as to prevent the same from entering the said openings.

2. In a grating such as described, the combination consisting of the parallel bars *d*, secured together and constructed to fit neatly in the openings of the grating *a*, the vertical post *c*, secured at the center of the grating *a*, the spiral spring *g*, and nut *h*, the rods *i*, cross-bar *k*, and handle *l*, substantially as set forth.

3. In a grating such as described, the combination of the grating *a*, the movable bars *d*,

constructed to fit neatly in openings of the grating *a*, and a number of circular pieces of glass, *n*, secured in the bars *d* or *f*, whereby light may be admitted to vault over which the
5 grating is placed.

4. A grating for vaults, the parallel openings of which are constructed with tapering sides, forming an opening greater at the base than at the top, in combination with a series
10 of parallel bars having a corresponding taper and secured together by one or more cross-bars, and a means whereby the movable bars may be withdrawn or placed in position and

revolved at right angles to their former position.

5. A grating for vaults, in combination with the movable bars *d*, provided with an outwardly-projecting flange, *m*, the vertical post *c*, nut *h*, spiral spring *g*, the rods *i*, cross-piece *k*, and handle *l*, substantially as and for the
15 purpose set forth. 20

ELLA MARATTA.

Witnesses:

W. C. BARR,

M. E. HARRISON.



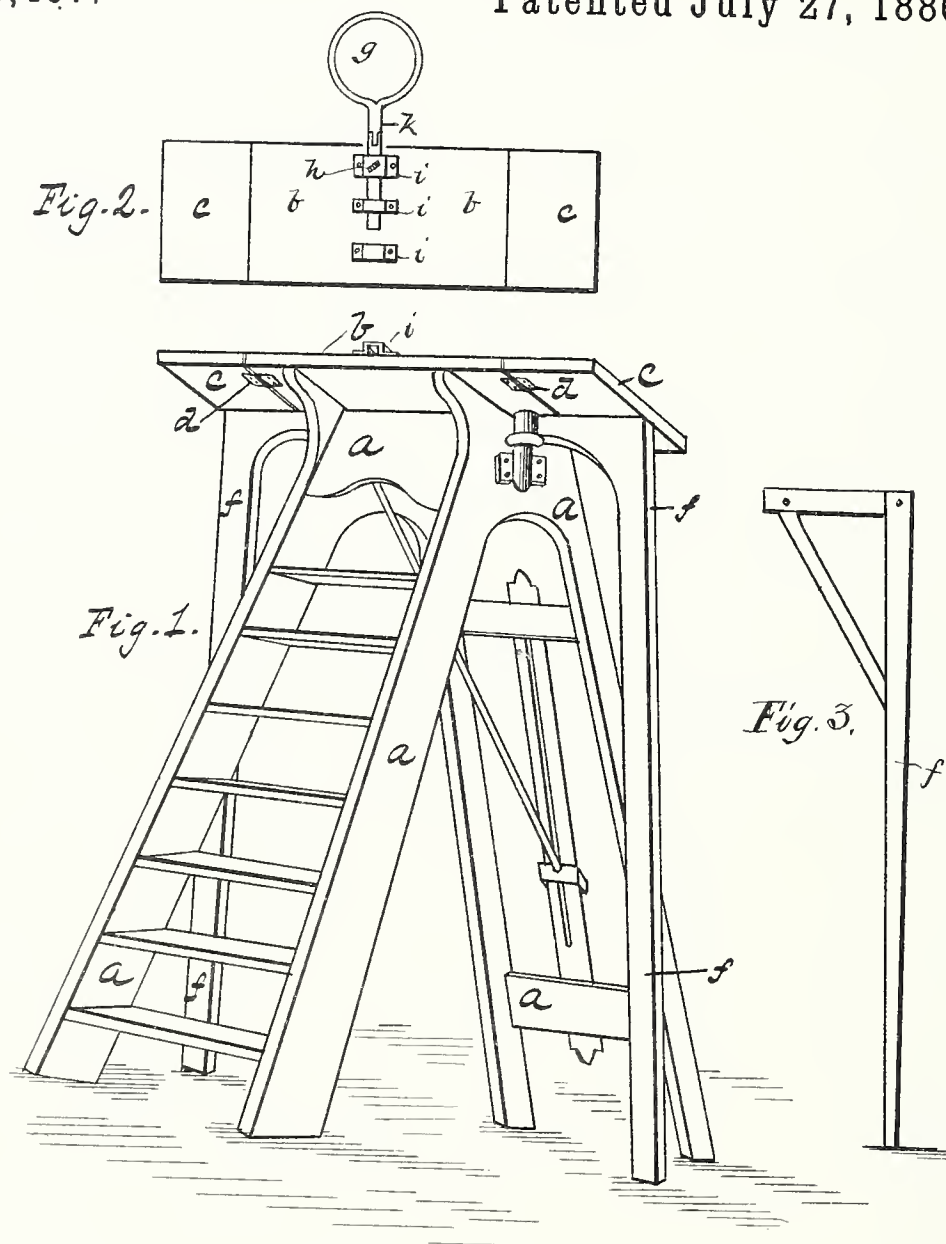
(No Model.)

A. E. GEISSINGER.

STEP LADDER.

No. 346,437.

Patented July 27, 1886.



Witnesses:
H. E. Harrison,
J. H. Roney

Inventor:
Anna E. Geissinger
Per. O. D. Lewis
Attorney.

UNITED STATES PATENT OFFICE.

ANNIE E. GEISSINGER, OF ALLEGHENY, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO GEORGE B. GEISSINGER, OF SAME PLACE.

STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 346,437, dated July 27, 1886.

Application filed March 29, 1886. Serial No. 197,040. (No model.)

To all whom it may concern:

Be it known that I, ANNIE E. GEISSINGER, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Step-Ladders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in step-ladders. The object being to provide a step-ladder whereby the platform or top may be extended at both ends and a means for supporting the same in a horizontal position; and with this end in view my invention consists in certain details of construction and combination of parts, as will be more fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a perspective view of a step-ladder provided with suitable braces for suspending the same in a horizontal position. Fig. 2 is a plan view of the top or platform, showing the folding bracket in which a bucket or pail may be secured. Fig. 3 is a side elevation of another form of the leg or rest in which a brace is secured, which adds additional strength to the leg or rest.

To put my invention into practice, I provide a step-ladder, *a*, of any well-known design, such as are now in common use. On either end of the top or platform *b*, I secure extension-leaves *c*, with hinges *d* placed on the under side, which admits of the leaves *c* fold-

ing or falling to the sides of the ladder *a* in a vertical position. Secured to the under side of the top or platform *b* are vertical folding legs or rests *f*, capable of being folded against the sides of the ladder when the extension-leaves *c* are in a vertical position, and used to sustain the leaves *c* in a horizontal position. At the rear of the platform *b* is secured, in staples *i*, a folding loop, *g*, into which a bucket or pail may be secured. This loop *g* is provided with a jointed square bar, *k*, which is held in position on the platform by three staples, *j*. A set-screw, *h*, placed in the top of the first staple *i*, secures the bar rigidly. When it is desired to fold or droop the loop *g* in a vertical position, the bar *k* is withdrawn from the staples *i* until the hinge or joint comes to the edge of the platform *b*. The advantages of this addition to the top or platform *b* of the ladder *a* are, the operator on the platform *b* may move from end to end and not overbalance the ladder *a*, affords more room for working, and does not require as much moving about.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

A step-ladder provided with folding extension-leaves *c*, hinged to the top or platform *b*, the vertical hinged legs or supports *f*, capable of being folded against the sides of the ladder *a*, and a folding loop, *g*, secured to the rear of the platform *b*, substantially as set forth.

ANNIE E. GEISSINGER.

Witnesses:

M. E. HARRISON,
JNO. H. RONEY.

(No Model.)

L. McKEOGH.

FOOT PAD FOR MACHINE TREADLES.

No. 345,248.

Patented July 6, 1886.

Fig. 1.

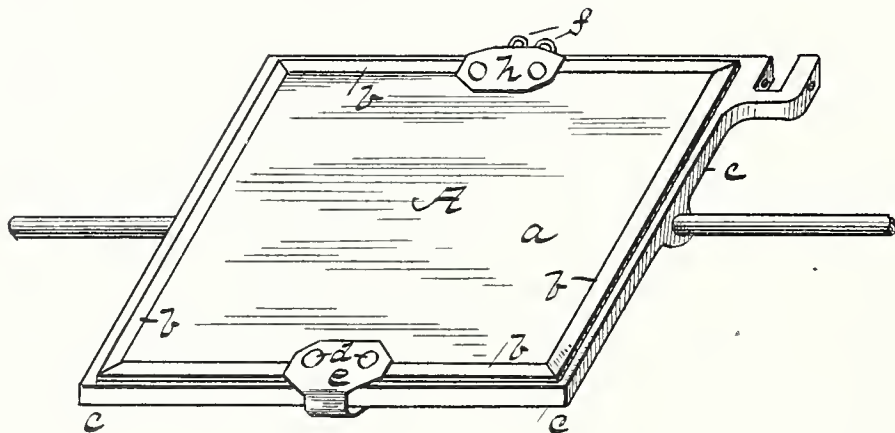


Fig. 2.

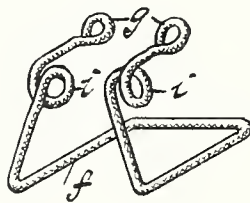
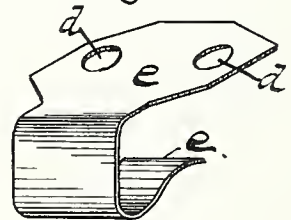


Fig. 3.



Witnesses:
M. E. Harrison
J. V. Smith

Inventor:
Lizzie McKee
Per. O. D. Lewis
Att'y.

UNITED STATES PATENT OFFICE.

LIZZIE McKEOGH, OF PITTSBURG, PENNSYLVANIA.

FOOT-PAD FOR MACHINE-TREADLES.

SPECIFICATION forming part of Letters Patent No. 345,248, dated July 6, 1886.

Application filed February 10, 1886. Serial No. 191,507. (No model.)

To all whom it may concern:

Be it known that I, LIZZIE McKEOGH, of Pittsburg, (South Side,) in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Foot-Pads for Machine-Treadles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in foot-pads for treadles of machines, the objects being to provide a pad that will be a non-conductor of cold from the metal treadle below, and a means of securing the same; and with these ends in view my invention consists in one or more pieces of non-conducting material secured together, having a hook and spring secured thereto for attachment to the treadle, as will be more fully described hereinafter.

In the accompanying drawings, Figure 1 is a perspective view of my improved foot-pad as attached to the treadle of a sewing-machine. Fig. 2 is an enlarged perspective view of the wire spring used in securing the pad at the rear of the treadle. Fig. 3 is an enlarged perspective view of a flat hook detached from the pad and used for attaching the front of the same to the treadle.

To put my invention into practice I provide a piece of cork or other non-conducting mate-

rial, *a*, of a size and shape corresponding to that of the treadle *c*, to which it is attached, and cover the same about the edges and under side with oil-cloth *b*, or other suitable material, thereby increasing the strength and preventing tearing or separation of the parts, thus forming a non-conducting foot-pad, *A*. To the front of this pad *A* is secured by rivets *d* a broad flat hook, *e*. At the rear of the pad *A* is a double steel wire, *f*, having the two ends *g* secured beneath a metallic plate, *h*, and bent in such a manner as to form spiral springs *i* and project a short distance under the pad *A*. The hook *e*, secured to the pad *A*, when placed in position at the front of the treadle *c*, and the wire spring *f* forced in place at the rear, secures the pad *A* to the treadle *c* and in position for use.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

As a new article of manufacture, a foot-pad for attachment to treadles, said pad being made of cork or any suitable material, and provided at the front with a flat hook and at the rear with a spring-hook, as a means of attaching and detaching it from the treadle of a machine, substantially as described.

LIZZIE McKEOGH.

Witnesses:

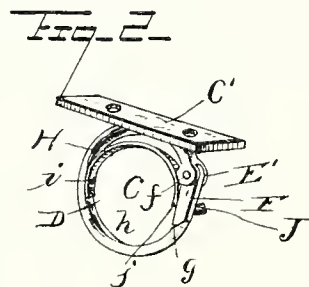
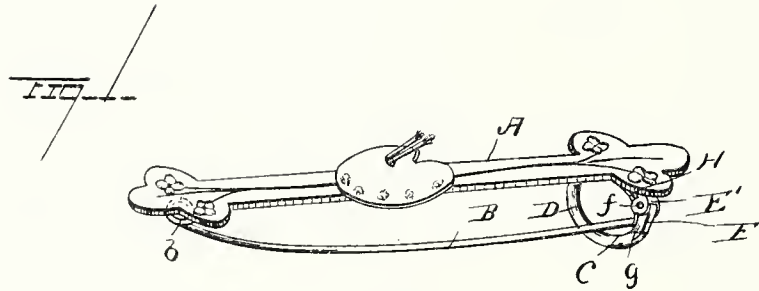
M. E. HARRISON,
C. D. HERPST,
H. T. MORRIS.

(No Model.)

S. E. CHEESMAN.
CATCH FOR BREASTPINS.

No. 353,401.

Patented Nov. 30, 1886.



Witnesses

Wm. T. Lill

W. Beruhap

Inventor

Mrs S. E. Cheesman

By her Attorneys

C. A. Snowden

UNITED STATES PATENT OFFICE.

SARAH E. CHEESMAN, OF SNOW SHOE, PENNSYLVANIA.

CATCH FOR BREASTPINS.

SPECIFICATION forming part of Letters Patent No. 353,401, dated November 30, 1886.

Application filed June 1, 1886. Serial No. 203,809. (No model.)

To all whom it may concern:

Be it known that I, SARAH E. CHEESMAN, a citizen of the United States, residing at Snow Shoe, in the county of Centre and State of Pennsylvania, have invented a new and useful Improvement in Catches for Breastpins, of which the following is a specification, reference being had to the accompanying drawings.

My invention has relation to improvements in catches especially adapted for use on breastpins or other articles of jewelry or personal wear; and the novelty consists in the peculiar construction, combination, and arrangement of the various parts for service, substantially as hereinafter fully set forth, and particularly pointed out in the claim.

The object of my invention is to provide a catch which shall automatically and effectively hold the securing-pin in position, and which shall combine strength, simplicity, and durability of construction with cheapness of manufacture.

In the drawings hereto annexed, Figure 1 is a perspective view of a breastpin having my improvement applied thereto. Fig. 2 is an enlarged detail view of the catch.

Referring to the drawings, in which like letters of reference indicate corresponding parts in both the figures, A designates the cross bar or plate of a breastpin, of any ordinary construction and shape and material at present in use or desirable.

B designates the pin-tongue or securing-pin, having one end thereof bent into a coil, as at *b*, and secured to the cross-bar, while the other end is pointed or sharpened and adapted to engage the clasp C.

The clasp or fastening device comprises an annulus or ring, D, and a base-plate, C', formed integral with said ring, or separate therefrom and secured thereto, and square or rectangular in shape. The base-plate C' is riveted or otherwise suitably secured to the cross-bar A, transversely across the same, so that the spring-pin B can readily and effectively engage or fit within the ring, as will be more fully described presently, said pin B being arranged longitudinally with the cross-bar or base-plate A. The ring or annulus C is cut away, as at E, and one of the ends of said ring is bifurcated at a suitable point in its circumference, between the arms of which is pivoted a catch, F, by means of a pin, *f*, bearing in the arms of the bifurcated portion. The opposite end

of the annulus or ring is beveled, as at *g*, and the free end of the pivoted catch is also beveled, as at *h*, and adapted to meet and fit against the beveled end of the ring or annulus, thus providing a tight and snug joint therefor.

The catch F is normally kept closed and in engagement with the free beveled end of the ring C by means of a spring, H, rigidly secured by rivets, soldering, or otherwise at one end to the inner face of the ring, as at *i*, and free at its other end, to bear against the inner face of the catch F, as at *j*, said catch having a thumb-piece, J, secured on one of the side faces thereof for its convenient manipulation.

The operation of my invention is as follows: To catch the free end of the spring-pin in the ring or annulus, pressure is exerted on the end thereof until it comes in contact with pivoted spring-pressed catch F, which will give at its free end and move away from the beveled end of the ring, thus allowing the pin to pass easily and readily into the ring, even when operated by one hand only. To disengage the pin from the ring, the catch F is moved inward against the tension of the spring, and the spring-pin B can then be readily moved from engagement with the detaining-ring.

A breastpin constructed in accordance with my invention is simple, strong, and durable, easy, effective, and automatic in operation, and cheap of manufacture.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

In a breastpin, a cross-bar or other suitable ornament, and a spring-controlled pin connected thereto, in combination with an open annulus or ring affixed upon the ornament or bar, a catch pivotally connected to one end of the ring and adapted to come in contact with the other end of the ring and completely close the same, and a spring connected to the ring and bearing against the pivoted catch to normally press it in contact with the ring and thereby close the latter, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

SARAH E. CHEESMAN.

Witnesses:

WILLIAM S. PHILLIPS,
C. T. CHEESMAN.

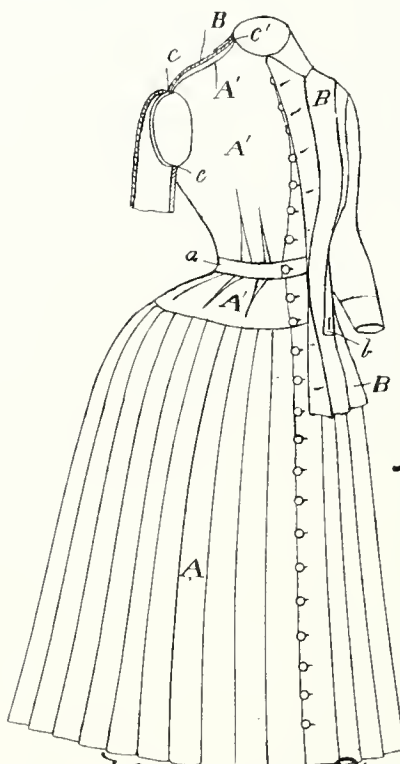
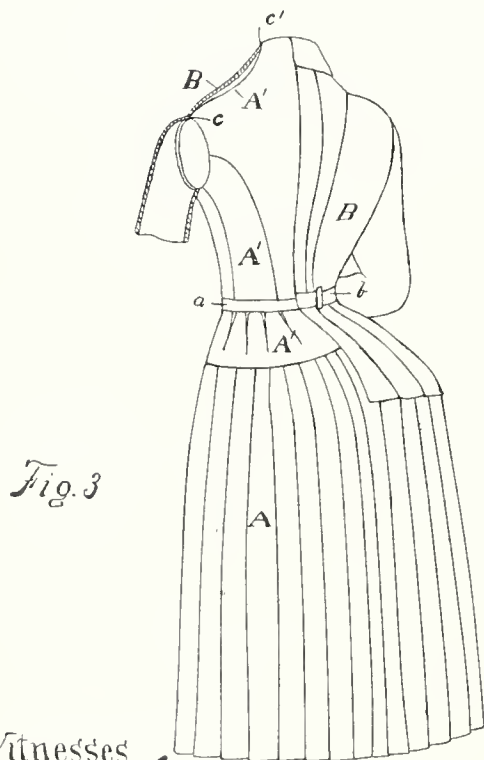
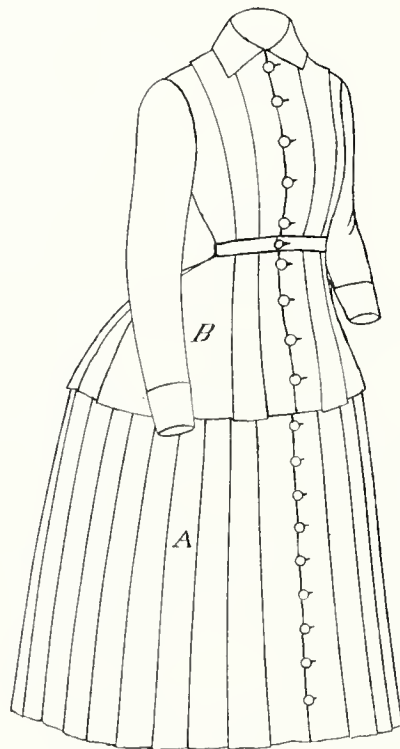
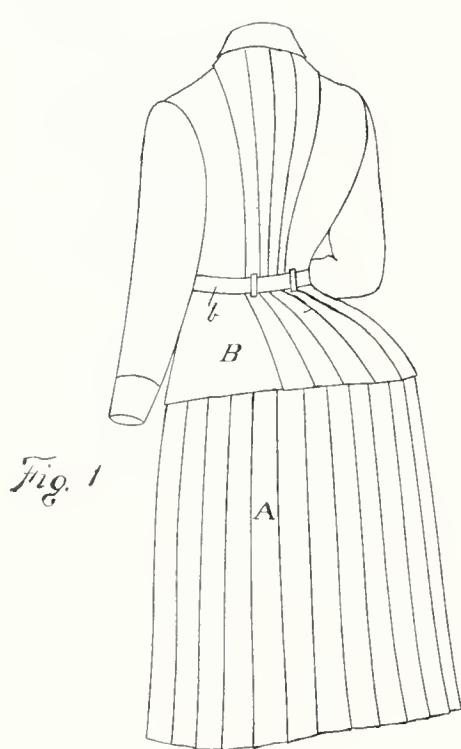
(No Model.)

M. E. BROWN.

WATER PROOF OVER GARMENT.

No. 343,698.

Patented June 15, 1886.



Witnesses.
T. T. Holden
J. S. Rusk

Inventor
Martha E. Brown
per Hollenbeck & Hallen
Atty.

UNITED STATES PATENT OFFICE.

MARTHA E. BROWN, OF ERIE, PENNSYLVANIA.

WATER-PROOF OVER-GARMENT.

SPECIFICATION forming part of Letters Patent No. 343,698, dated June 15, 1886.

Application filed February 10, 1886. Serial No. 191,480. (No model.)

To all whom it may concern:

Be it known that I, MARTHA E. BROWN, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Ladies' Water-Proof Overwear Garments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to ladies' water-proof overwear garments; and it consists in certain improvements in the construction thereof, as will be hereinafter fully set forth, and pointed out in the claims.

My invention is illustrated in the accompanying drawings, as follows:

Figure 1 is a back view. Fig. 2 is a front view. Fig. 3 is the same view as in Fig. 1 with jacket of the garment partly broken away to show construction. Fig. 4 is the same view as in Fig. 2 with the jacket of garment broken as in Fig. 3.

The object of the invention is to make a lady's water-proof overwear garment so it will fit the figure and have a neat appearance. The garment is composed of three parts—viz., a skirt, A, a waist, A', and a jacket, B. The skirt and the jacket are made of water-proof material; but the waist is made of any strong material, such as dress-waist linings are commonly made. The skirt is attached to the waist as is common in many styles of dress having a jacket or long-skirted basque; but, unlike garments having such a waist supporting the skirt, the waist is permanently attached to and forms a lining for the jacket, so that the garment as a whole is inseparable and remains intact when taken off. This is an essential feature, for garments of this kind should be so they can be removed easily and quickly and carried without danger of losing one of their parts, and be as quickly and easily put on when required.

The manner of attaching the waist and the jacket together may be considerably varied. The attachment, to be the most serviceable, should be made by joining the material in the seams, rather than stitching through the water-

proof material at an exposed point, and to keep the two parts properly together, so there will be no trouble in putting on or taking off, they should be firmly joined together at the armholes and neck. I have found, if they are joined at those seams, there is little use in joining them elsewhere, and that it is better not to join them at any other point, as the garment will adapt itself to the garment over which it is worn without drawing and feeling uncomfortable to the wearer if the lining or waist and the jacket are free from each other at all points except at the armholes and neck.

In Figs. 3 and 4 the letters *c c'* indicate the points where the waist and jacket are joined together. This method of attaching the two parts is also the easiest way of doing it, for the waist and the body of the jacket can be made separately without reference to each other, and when the sleeves are sewed in and the collar sewed on the parts will all be sewed together at one operation.

In the drawings the waist is shown with a waistband, *a*, and the jacket with an over-belt, *b*. These, however, are immaterial details, which may be varied as desired.

I am aware that garments have been made consisting of a cape or cloak and a jacket within or below the cloak, and attached to the cloak by sewing the two together in certain seams—as, for example, in patent to Louis Granger, March 31, 1885; but such a construction is not contemplated by my invention, and the purposes of my invention cannot be secured by such a construction.

What I claim as new is—

1. In a lady's water-proof overwear garment, the combination of a skirt and jacket of impervious material and a waist of ordinary material, to which the skirt is attached, the said waist acting as a lining to the jacket, substantially as set forth.

2. In a lady's water-proof overwear garment, the combination of a skirt and a jacket of impervious material and a waist of ordinary material, which supports the skirt, and is attached to the jacket as a lining by the two parts being sewed together in one or more of the seams, substantially as set forth.

3. In a lady's water-proof overwear garment, the combination of a skirt and a jacket of impervious material and a waist of ordinary material, which supports the skirt, and
5 is attached to the jacket as a lining by the two parts being sewed together in the armhole and neck seams, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MARTHA E. BROWN.

Witnesses:

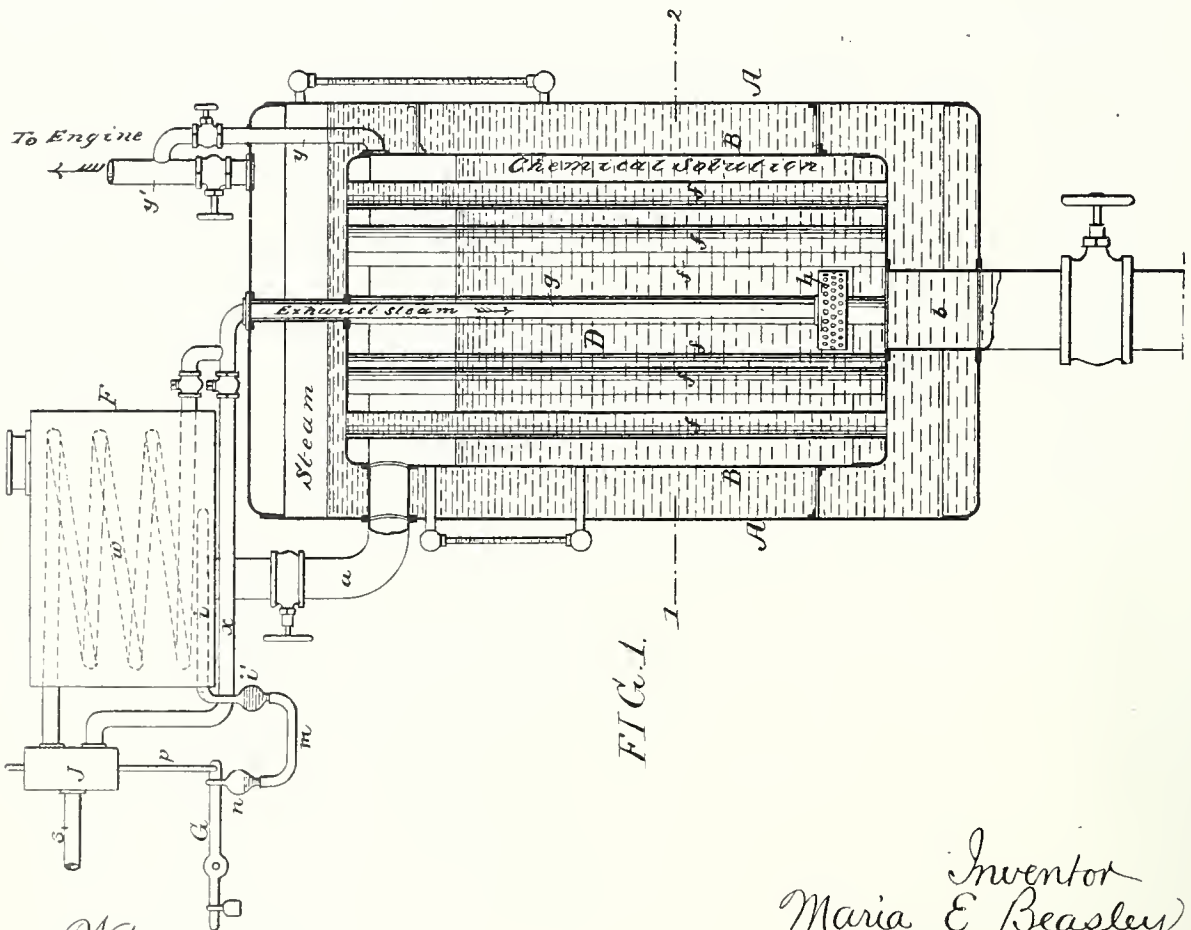
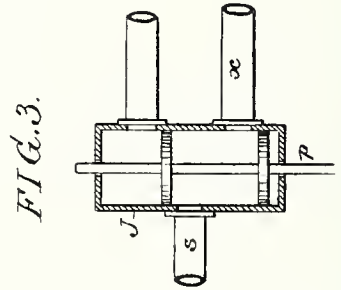
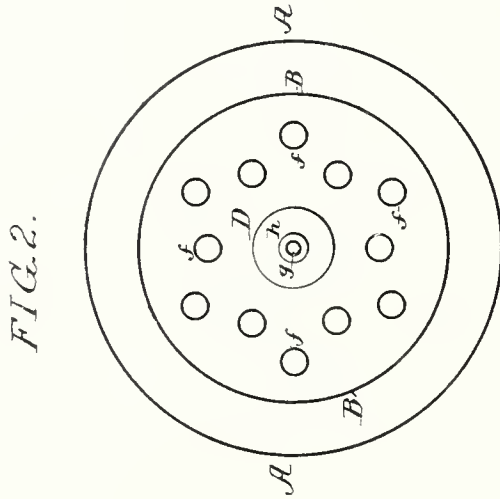
JNO. K. HALLOCK,
ROBT. H. PORTER.

(No Model.)

M. E. BEASLEY.
STEAM GENERATOR.

No. 341,721.

Patented May 11, 1886.



Witnesses
William F Davis
William D Conner

Inventor
Maria E. Beasley
by her Attorneys
Howson & Sons

UNITED STATES PATENT OFFICE.

MARIA E. BEASLEY, OF PHILADELPHIA, PENNSYLVANIA.

STEAM-GENERATOR.

SPECIFICATION forming part of Letters Patent No. 341,721, dated May 11, 1886.

Application filed January 4, 1886. Serial No. 187,540. (No model.)

To all whom it may concern:

Be it known that I, MARIA E. BEASLEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain
5 Improvements in Steam-Generators, of which the following is a specification.

My invention relates to that class of steam-generators in which the heat is derived from a chemical compound, the objects of my invention being to so construct such a generator
10 as to insure the thorough heating of the water, to properly heat the chemical compound before introducing the same into the generator, to maintain said compound in an active state
15 as long as possible, and to prevent the overheating of the compound before the admission of the same to the heating-chamber of the generator.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of a steam-generator constructed in accordance with my invention; Fig. 2, a sectional plan view on the line 1 2, Fig. 1, and Fig. 3 an enlarged view of a valve forming part of the device.

25 It has been proposed to effect the generation of steam by using in the generator a vessel containing a chemical compound, which, on the addition of water or steam, will develop heat in somewhat the same manner as heat is developed on slaking caustic lime with water; and my invention consists of a generator intended for the use of such chemical fuel. The chemical which I prefer to use is a mixture of hydrate of soda, about one hundred parts to water twenty parts. The particular chemical employed, however, forms no part of my present invention, the latter being limited to the construction of the generator, which is shown in the drawings, A being the outer shell or casing suitably supported within, which is the casing B of a heating-chamber, D, which is intended to contain the liquid chemical substance or compound from which is derived the heat necessary for generating steam in the vessel A, this solution or compound being introduced into the chamber D through a pipe, *a*, and being withdrawn, when spent, through a pipe, *b*.

50 Through the chamber D extend tubes *f*, which serve to provide for the circulation of water through said chamber, and for the effective application of the heat of its contents

to the water for the purpose of vaporizing the same.

Generators have been devised in which the fuel-chamber surrounds the water-chamber, the latter having tubes projecting down into the fuel-chamber and communicating with a hollow head; but in such case there can be no circulation except that set up through the tubes, or else a downward circulation through some of the tubes in opposition to the natural current which would be caused by the heat to which said tubes are subjected. In my generator, however, there is a perfect circulation of the water, the latter rising through the tubes which pass through the fuel-chamber and descending adjacent to the outer casing of the generator, where it is comparatively free from the influences of the heated shell of the fuel-chamber.

Into the chamber D extends a pipe, *g*, which communicates with the exhaust from the engine or other apparatus, for the operation of which the steam generated in the vessel A is intended, said pipe *g* being perforated or provided with a perforated head, *h*, so as to insure the dissemination of the steam or water of condensation in a number of small streams throughout the chamber D, and thus cause its intimate admixture with the contents of said chamber.

Before entering the chamber D the pipe *g* forms a coil, *w*, in a vessel, F, communicating with the pipe *a*, this vessel serving as a means of heating the chemical solution or compound prior to its introduction into the chamber D within the generator. By thus heating the chemical before introducing it into the chamber D, I am enabled to maintain a practically uniform pressure in the generator, as the temperature of the water is not lowered on each introduction of fresh chemical, whereas when the chemical is introduced in a cold state there is a lowering of the temperature of the water until such time as the temperature of the chemical is (owing to the absorption by said chemical of the water or steam) raised to that of the water in the generator.

In order to prevent the imparting of too high a degree of heat to the compound or solution in the preliminary heating-vessel F, however, I provide said vessel with a tube, *i*, containing alcohol or other volatile liquid,

this tube having a bulb, *i'*, which is in communication through a flexible pipe, *m*, with a bulb, *n*, secured to or forming part of one arm of a lever, *G*, the other arm of which is weighted, said lever being connected to the stem *p* of a valve, *J*, which is constructed, as shown in Fig. 3, so that when in its elevated position it will direct the steam from the supply pipe *s* to the pipe *g* through the coil *w* in the vessel *F*; but when the valve is lowered it will cut off said coil from communication with the pipe *s*, and will direct the steam through a branch pipe, *x*, to the pipe *g*.

As soon as the heat of the chemical compound in the vessel *F* rises above the required degree the expansion of the fluid in the tube *i* causes the mercury or other liquid to be forced from the bulb *i'* into the bulb *n*, the weight thus added thereto causing the lever *G* to tilt, and thus effecting such an operation of the valve *J* as will direct the steam to the branch *x* and cut off the coils *w*, the steam being directed to the latter again when the temperature of the compound is so far reduced as to effect a contraction of the liquid contents of the tube *i* and a withdrawal of the mercury from the bulb *n*. Check valves prevent back-flow through either the coil *w* or branch *x*.

Both the generator and the heating-chamber are preferably provided with gages, as shown, whereby the level of water in the generator or of the solution or compound in the heating-chamber is indicated.

The chemical solution is heated by outside means in starting the generator, and in order that the vapor arising from said solution may be available for work in operating the motor or other apparatus before steam is generated, I provide the heating-vessel *B* with a valved pipe, *y*, communicating with the discharge-pipe *y'* of the generator, the valve in said pipe *y* being closed when steam under sufficient pressure has been generated.

I claim as my invention—

1. The combination, in a chemical-fuel steam-generator, of the generating-vessel, a fuel holder contained therein, but accessible from the

outside of the generator, and circulating-tubes passing through said fuel-holder, all substantially as specified.

2. The combination, in a chemical-fuel steam-generator, of the generating-vessel, a fuel holder, *B*, contained therein, a fuel-heater communicating with said holder *B*, and a pipe for conveying the exhaust-steam first through the fuel-heater, and then into the holder *B*, all substantially as specified.

3. The combination, in a chemical-fuel steam-generator, of the generating-vessel, the fuel-holder contained therein, the fuel-heater communicating with said holder, a steam-pipe passing through the fuel-heater and having a branch outside of the same, and a valve whereby steam can be caused to pass either directly through the pipe or through the branch, all substantially as specified.

4. The combination of the generator *A*, the fuel-holder *B*, contained therein, the supplementary fuel-heater *F*, containing a steam-coil, a valve controlling the admission of steam to said coil, and a thermostat in the heater for operating said valve, all substantially as specified.

5. The combination of the generator *A*, the fuel-holder *B*, contained therein, the supplementary heater *F*, containing a steam-coil, the pipe *g*, extending into the holder *B*, the branch *x*, a valve whereby steam may be directed to the pipe *g*, either through the heating-coil in the vessel *F* or through said branch *x*, and a thermostat for operating said valve, all substantially as specified.

6. The combination of the steam-generator and its pipe *y'* with the fuel-holder *B*, contained in the generator, and having a valved pipe, *y*, communicating with the pipe *y'*, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARIA E. BEASLEY.

Witnesses:

WILLIAM D. CONNER,
HARRY SMITH.

(No Model.)

E. L. PRIDHAM.
WASH BOARD.

No. 337,349.

Patented Mar. 2, 1886.

Fig. 1.

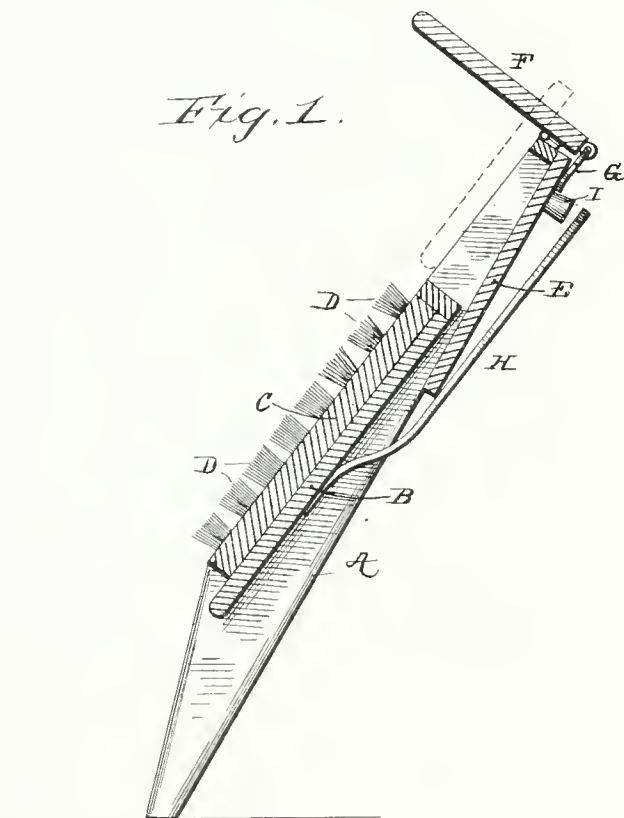


Fig. 2.

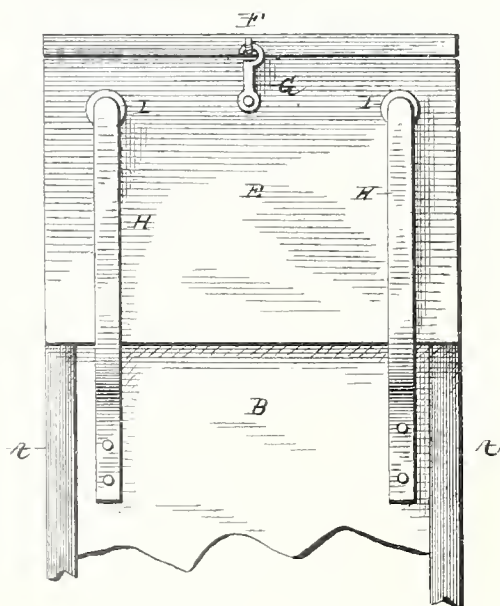
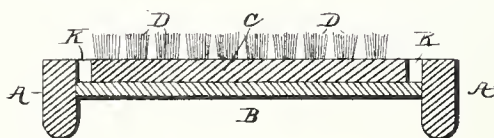


Fig. 3.



WITNESSES

Chas. H. Davis
F. T. Chapman

INVENTOR

Emma L. Pridham.
By C. W. Alexander
her Attorney

UNITED STATES PATENT OFFICE.

EMMA L. PRIDHAM, OF PHILADELPHIA, PENNSYLVANIA.

WASH-BOARD.

SPECIFICATION forming part of Letters Patent No. 337,349, dated March 2, 1886.

Application filed October 22, 1885. Serial No. 180,584. (No model.)

To all whom it may concern:

Be it known that I, EMMA L. PRIDHAM, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Wash-Boards, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in wash-boards, and is designed, primarily, to lessen the labor attending the operation incident to washing clothes. Since this labor is performed by women, and they, by their peculiar physical constitution, are especially susceptible to injury from the difficulty and strain of the work, this invention was conceived with the idea in view that a device should be produced that should reduce the said labor to a minimum without in the least impairing the efficiency, but rather increasing the same. Such a device is shown in the annexed drawings, in which—

Figure 1 represents a vertical section of the device; Fig. 2, a partial rear view, and Fig. 3 a cross-section.

The sides A of the board are of peculiar shape, as will be seen from Fig. 1. At a point near the lower portion of the side the said side is wide, and from this point tapers in both directions—that is, the lower taper forms the leg and the upper taper the main portion of the side. From one side to the other extends the back B, parallel to the upper or main taper, and at a sufficient distance from the edge of the same to receive and support the brush-block C, containing the bristles D, flush with the surface of said taper edge. This construction raises the said bristles above the surface

of the board proper. The widening of the sides of the board allows the placing of the rubbing-surface at such an angle as to relieve the strain, discomfort, and injury of the stooping position assumed in washing. Experiment has proved that the bringing forward of the lower part of the brush-block five-eighths of an inch produces very satisfactory results in this direction, producing comfort where before was discomfort and injury. The bristles elevate the clothes above the surface of the block, and hence prevent them from coming in contact with the dirty water that flows from them and again enters the tub.

A back piece, E, attached to the back of the upper portion of the sides and extending a short distance below the upper edge of main back B, directs the flow of any water that may pass above the upper edge of the said piece B, and also serves the function of a soap-holder.

Hinged to the upper end of the board proper is a flap or "splash-board," F, having an eye for the reception of the hook G on the back of the board. When in use this flap is hooked, and is then in the position shown in Fig. 1, at right angles to the board, and thus protecting the person working from the splashes of water that fly upward.

To the back B are attached the springs H, consisting each of a spring-strip secured at the lower end, and being at the sides of the board. The free ends are coincident with elastic buffers I on the piece E. This construction gives a uniform yield to the board when in use and the pressure incident to washing is employed.

It will be seen from Fig. 3 that there is a space (designated by K) on each side of the brush-block. This space allows for the expansion and contraction of the said block when wet and when drying, and thus preventing the warping or twisting of the same.

I am aware that bristle brushes for a rubbing-surface and spring-supporting bearings are not broadly new in wash-boards, and hence do not wish to be considered as broadly claiming the same.

An additional function of the splash-board is to support the body during the use of the wash-board, it adding great comfort to the operation, as the strain on the back is thus relieved.

I claim—

A wash-board consisting of a brush-block set at an angle to the length of the frame, and provided with expansion-spaces on each side, a splash-board hinged to the top of said board, and spring-strips secured at their lower ends to the back of the board, and at their upper ends coincident with elastic buffers on the back, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

EMMA L. PRIDHAM.

Witnesses:

GEO. A. PRIDHAM,
WILLIAM T. GABELL.



(No Model.)

A. A. FEARN.
LIFE PRESERVING CORSET.

No. 345,960.

Patented July 20, 1886.

Fig. 1.

Fig. 3.

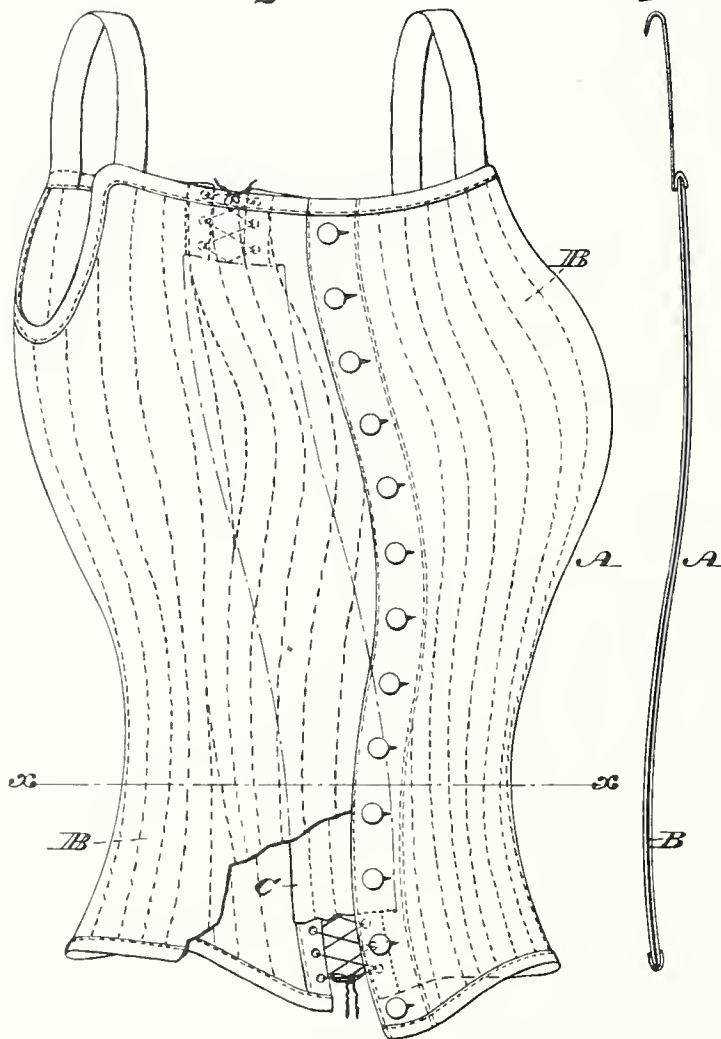
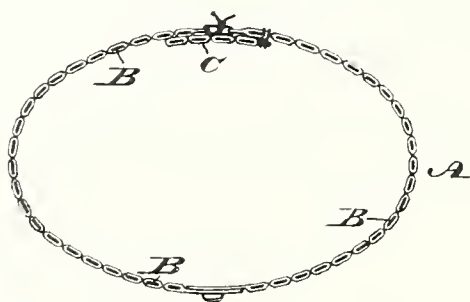


Fig. 2.



WITNESSES

L. Louville
W. F. Fischer

INVENTOR:

Amelia A. Fearn
BY John A. Wieserheim
ATTORNEY.

UNITED STATES PATENT OFFICE.

AMELIA A. FEARN, OF PHILADELPHIA, PENNSYLVANIA.

LIFE-PRESERVING CORSET.

SPECIFICATION forming part of Letters Patent No. 345,960, dated July 20, 1886.

Application filed March 6, 1886. Serial No. 194,297. (No model.)

To all whom it may concern:

Be it known that I, AMELIA A. FEARN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Life-Preserving Corsets, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a perspective view of a corset embodying my invention. Fig. 2 represents a section in line *xx*, Fig. 1. Fig. 3 represents a vertical section thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a corset which is provided with stays of cork, which stays extend from the top to the bottom of the corset, whereby it forms a life-preserver, is prevented from rusting, and sets comfortably on the body.

It further consists of a guard for preventing chafing action of the lacing of the corset.

Referring to the drawings, A represents a corset, and B represents the stays thereof, said stays being formed of pieces or strips of cork, which are fitted in pockets of the corset.

The corset may be worn as usual, but is more especially designed for use by one traveling on water, in which case, owing to its buoyant nature, it is admirably adapted for life preserving purposes. The stays, owing to their flexible nature, set comfortably in position, and yield with the motions of the body, and preserve the shape of the corset. They are not liable to break or rust, nor cut through the fabric, and may be made thin and light, so that the weight of the corset is materially reduced.

It is evident that travelers on water, male and female, may constantly wear corsets of the kind, so as to be prepared for shipwrecks, &c., the corset in other respects possessing advantages as usual in articles of its kind.

In order to prevent chafing or rubbing action of the lacing on the body, I employ a guard, C, consisting of a flap or strip of corset fabric, or other material, secured at one side to the adjacent section of the corset at the back thereof, and covering the lacing, said guard also containing cork stays, thus increasing the buoyant nature of the corset.

I am aware that it is not new to place in or attach to various kinds of garments pieces of cork of different sizes for the purpose of adding to the buoyancy of the same, and thereby afford protection to the wearer thereof, and such I do not claim; but I am not aware that strips of cork have been used as stays or supports in corsets, the same possessing the advantages over the stays now used, as hereinbefore fully set forth.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A corset having stays formed of strips of cork, each strip composed of a single piece extending from the top to the bottom of said corset, and secured in a pocket therein, substantially as described.

2. A corset having a lacing-guard provided with strips of cork extending from the top to the bottom thereof, substantially as described.

AMELIA A. FEARN.

Witnesses:

JOHN M. HURLBURT,
MARY B. S. DRURY.

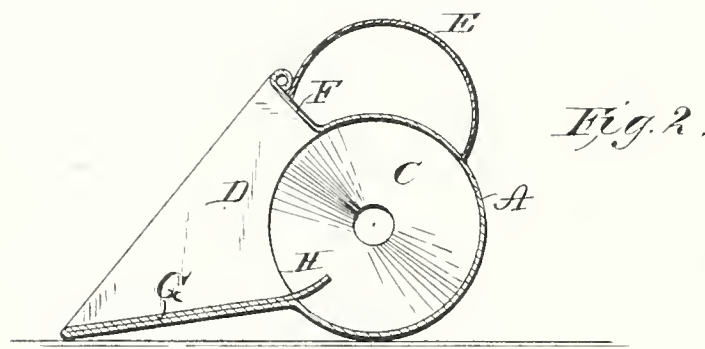
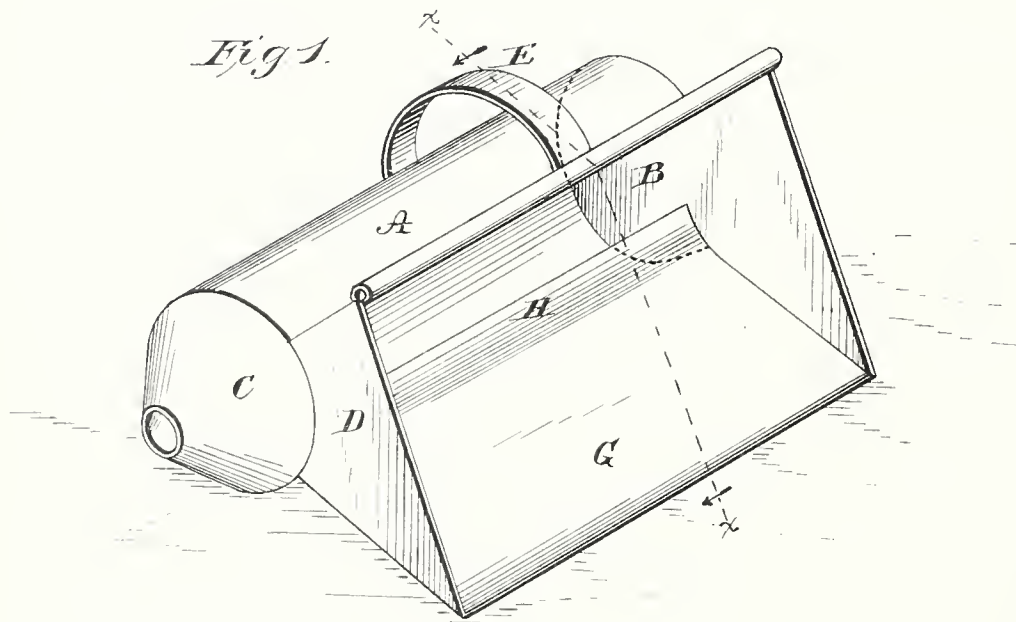
(No Model.)

F. K. MARSH & M. MARGERUM.

DUST PAN.

No. 346,761.

Patented Aug. 3, 1886.



WITNESSES
F. L. Ouraud
Edward Stanton

Fanny K. Marsh
Mary Margerum
INVENTORS
By *Louis Baggett & Co.*
Attorney

UNITED STATES PATENT OFFICE.

FANNY K. MARSH AND MARY MARGERUM, OF BLOOMSBURG, PA.

DUST-PAN.

SPECIFICATION forming part of Letters Patent No. 346,761, dated August 3, 1886.

Application filed June 7, 1886. Serial No. 204,361. (No model.)

To all whom it may concern:

Be it known that we, FANNY K. MARSH and MARY MARGERUM, both residents of Bloomsburg, in the county of Columbia and State of Pennsylvania, have invented certain new and useful Improvements in Dust-Pans; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of our improved dust-pan; and Fig. 2 is a transverse sectional view of the same, taken on line *xx* of Fig. 1.

Like letters of reference indicate like parts in the two figures.

Our invention has relation to dust-pans; and it consists in the improved construction and combination of the parts constituting the same, as will be hereinafter fully described and claimed.

One object of our invention is to construct a dust-pan which shall have a dust-receptacle forming a part thereof, and connected thereto in a manner such as will provide for receiving the dust and for retaining it against withdrawal by the broom or against displacement by a current of air.

Another object is to form a dust-pan from which the gathered dust may be readily emptied without scattering it.

We attain these objects by having the part forming the pan projecting over the edge of the receptacle and a little way into the same, and by providing one end of said receptacle with a funnel-shaped termination.

Referring to the drawings, A represents the strip of sheet metal forming the bottom and sides, which, together with the flat end piece B, the funnel-shaped end piece C, with its triangular offset D, and the handle E, constitutes said dust-pan. The strip A is bent to form a cylindrical portion, having an opening along one side, from one edge of which radial-

ly projects the flange F. At the upper edge of said flange a strengthening-roll is turned, to the under side of which is connected one end of the handle, while the other end of said handle is connected to the cylindrical portion. From the outer edge of said opening radially projects the portion of strip A which forms the pan G. This strip is bent back upon itself to make the pan stiff and strong, and to provide a ready means for forming the retaining-flange H. When in the act of taking up dust the broom pushes some over the pan, it falls into the receptacle, and any tendency it may have to follow the broom as it is moved away from the pan is overcome by said flange. Then, when the dust has been gathered into said receptacle, it can be readily turned out of the same through the funnel-shaped end.

Having thus fully described our invention, we claim and desire to secure by Letters Patent of the United States—

1. The combination of a dust-pan and a dust-receptacle provided at one end with a funnel-shaped opening, through which the gathered dust is emptied.

2. A dust-pan consisting of a strip of sheet metal bent to form a cylindrical portion, having an opening along one side, one end of said strip forming a flange radially projecting from one edge of said opening, the other end bent out radially from the other edge of the opening, then bent back upon itself to form the pan and dust-retaining flange, a piece of metal forming one end of the dust-pan, a funnel-shaped piece having a triangular offset at one side, forming the other end of said pan, and a handle.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of witnesses.

FANNY K. MARSH.
MARY MARGERUM.

Witnesses:

P. D. BLACK,
JOS. C. REIFSNYDER,
WM. C. MANSELL.

(No Model.)

M. D. BULLOCK.
GAME.

No. 346,892.

Patented Aug. 10, 1886.

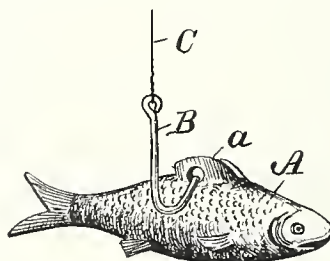
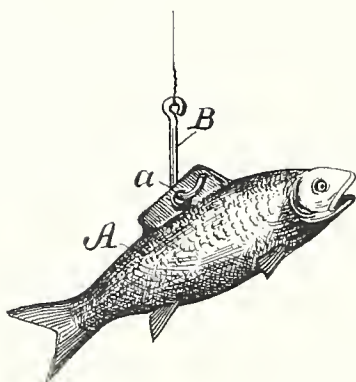
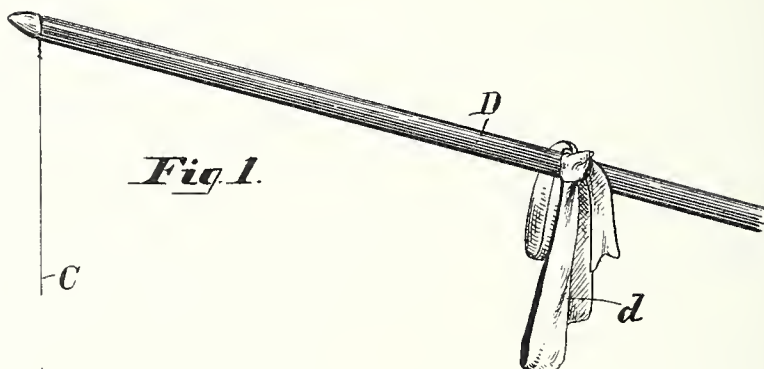


Fig. 4.

Fig. 5.

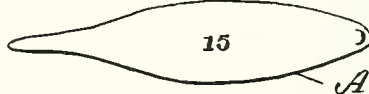
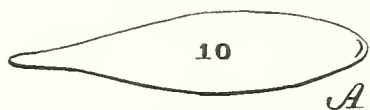
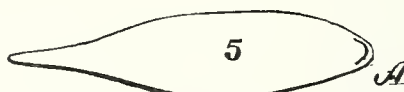
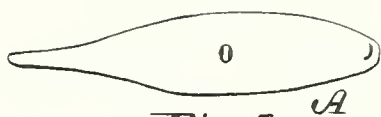


Fig. 9.

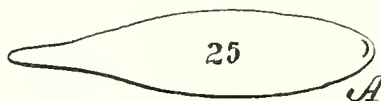
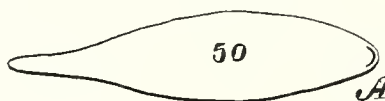


Fig. 10.



WITNESSES:

John Jolley Jr.
J. Norman Dixon.

Marie D. Bullock,
INVENTOR
By her Attorneys,
W. C. Strawbridge
Bonsall Taylor

UNITED STATES PATENT OFFICE.

MARIE D. BULLOCK, OF PHILADELPHIA, PENNSYLVANIA.

GAME.

SPECIFICATION forming part of Letters Patent No. 346,892, dated August 10, 1886.

Application filed March 8, 1886. Serial No. 194,379. (No model.)

To all whom it may concern:

Be it known that I, MARIE D. BULLOCK, a citizen of the United States, residing in the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Game known as Progressive Angling, of which the following is a specification.

My invention has relation to a game known as "progressive angling," and which is played subject to the rules hereinafter set forth; and it comprehends the apparatus used in playing the game, which embraces a novel article of manufacture, by the aid of which the said game is played—viz., a toy animal, preferably being a representation of a natural fish.

The game is played with a quantity of these toy animals, which, as hereinafter set forth, may be of any preferred construction, and which are to be caught or hooked from off tables by means of a hook attached to a line and rod or to a handle.

The game, hereinafter described as played with toy fishes, is played in accordance with the following rules:

RULES FOR PROGRESSIVE ANGLING.

Tables.—The tables should be not less than two feet square, or two feet in diameter, if round.

Chairs.—The chairs should be as far as possible of uniform height. The tables should be numbered 1, 2, 3, 4, 5, &c. No. 1 is the king-table. The last number is the booby-table.

Arrangement of the fish.—Place twenty fish on each table inside the ring which accompanies each set, and which forms the pool. The fish are numbered as follows: five, No. 0; four, No. 5; three, No. 10; three, No. 15; three, No. 25; two, No. 50.

Choosing partners.—Each lady will draw one of the gold rods. Each man will draw one of the silver rods. Those having rods with numbers corresponding will play together, and the numbers will indicate at which table the players shall begin, those drawing Nos. 1 playing against those drawing Nos. 1 A at the king-table; those drawing Nos. 2 playing against those drawing Nos. 2 A at the second table, and so on.

To begin each game: When all are seated in their proper places at the various tables, the bell

on the king-table must be rung, at which signal all should begin fishing. No one should begin fishing until the signal is given.

Angling.—Hold the rod in one hand only by the outer end. Allow the line to swing at its full length. The line must not be twisted around the pole. As each fish is hooked, it must be placed immediately in front of the player, outside of the ring which forms the pool. The fish must be detached from the hook without touching the fish or hook with the hands. Any fish touched by the hand either in catching or detaching from the hook must immediately be replaced in the pool.

End of each game.—When all of the fish in the pool at the king-table have been caught, one of the players at that table will strike the bell, at which signal all playing must cease. No fish caught after the signal to stop has been given can be counted.

Scoring.—The fish caught by each player shall be turned over, so as to show the numbers on the reverse side. Partners shall count the numbers on all the fish that have been caught by both. Those having the highest total win.

Progressing.—Those partners winning at any of the tables except the king-table advance to the next table higher and change partners for the next game. Those partners who win at the king-table remain at that table, but change partners for the next game. Those partners who lose at the king-table go down to the booby-table; then change partners for the next game.

Marking games won.—Those partners who win at the king-table shall each receive a gold fish as a marker. Those partners who win at any of the tables except the king-table shall each receive a silver fish as a marker. Those partners who lose at the booby-table shall each receive a red fish as a marker. As some players will endeavor to win the booby prize by failing to angle, and thus get the lowest score, each person at the booby-table must catch at least one fish.

Awarding prizes.—Those persons having the greatest number of gold fish, marking games won at the king-table, shall receive the king prizes. Those persons having the greatest number of silver fish, marking games won at

the tables other than the king-table, shall receive the progressive prizes. Those persons having the greatest number of red fish, marking games lost at the booby-table, shall receive the booby prizes. Should there be a tie between two ladies or two men it shall be decided by each one catching one fish, and the prize shall be given to the person who catches the fish bearing the lowest number.

10 *Prizes.*—There should be two each, king, progressive, and booby prizes.

15 *Duration of the play.*—At the time of beginning, the referee of the game, who is usually the host or hostess, should announce the hour when play shall cease and the prizes be awarded.

20 Each fish employed in playing the foregoing game is provided with an eye, loop, catch, hook, ring, or kindred contrivance by which it may be hooked or caught by a hook, and is also stamped, marked, impressed, indented, or otherwise provided with a number—as, for instance, 0, 5, 10, 15, 25, or 50—upon the under side, or that portion of the fish which is

25 concealed from view by being next to the table when the fish is laid upon the table. In the accompanying drawings I have represented toy fishes conveniently embodying my invention. These dummy or imitation fishes, which may be made in the semblance of any desired species of natural fish or animal that lives in the water, may be each made of any preferred material, (all, however, being of the same size and shaped to the outline

30 desired, or to that represented in the drawings,) each stamped or marked upon the under side with a number or other designating and distinguishing character, and each provided as to an exposed portion, conveniently

35 a fin, with a ring, eye, loop, hook, or other catch.

40 Plastic compounds are cheap materials of which to make the fishes; but sheet metal, porcelain, paper, celluloid, or other material or composition of matter may be employed, which, if desired, may be painted, silvered, gilded, or otherwise decorated at will.

45 In the drawings, Figure 1 represents in perspective a toy fish embodying my invention, and designated A. *a* is a loop or eye applied to the upper side of the said fish. *B* is a hook, *C* a line, and *D* a rod, preferably ornamented by means of the ribbon *d*. By the aid of the hook, line, and rod the fish in the figure has

50 been caught and lifted from the table.

Fig. 2 is a side view of the fish represented

in Fig. 1, representing also the catching-hook as about to be engaged with the eye or loop on the fish.

Figs. 3, 4, 5, 6, 7, and 8 are bottom plan views of fishes embodying my invention, respectively provided with the numbering 0, 5, 10, 15, 25, and 50, but otherwise essentially identical in appearance. It is obvious that the form and material of the fishes may be varied, it being, however, essential that they should all be alike and of such construction as to be each provided with an eye, loop, ring, or kindred contrivance, into which a catching-hook can be engaged, and by which they can be respectively and separately lifted, and as to also be each provided with a distinguishing number or mark, which is concealed when the fish is laid upon the table and exposed to view when it is raised therefrom.

75 From what has been stated it will be apparent that it is no departure from the invention to substitute for a fish or water-animal, as heretofore particularly referred to and preferred, a representation of some other animal or animate thing, the hooking of which it would be readily possible to imagine, and the invention is broad enough to comprehend any such substitution.

Having thus described my invention, I claim—

1. Apparatus for playing the game of progressive angling, which consists of hooks, each manually controlled by a rod or handle, and also of toy animals having each a loop, eye, ring, or hook by which they can be separately caught and lifted, and being also each provided with a designating letter or character so applied as to be concealed when the animal is laid upon a surface, but exposed when the animal is caught and lifted by the engagement of the hand-controlled hook with the eye or ring of the animal, substantially as set forth.

2. As an article of manufacture, a toy animal provided with a loop, eye, ring, or hook by which it can be lifted, and also provided with a distinguishing letter or character so applied as to be concealed when the animal is laid upon a surface, substantially as set forth.

In testimony whereof I have hereunto signed my name this 25th day of February, A. D. 1886.

MARIE D. BULLOCK.

In presenee of—

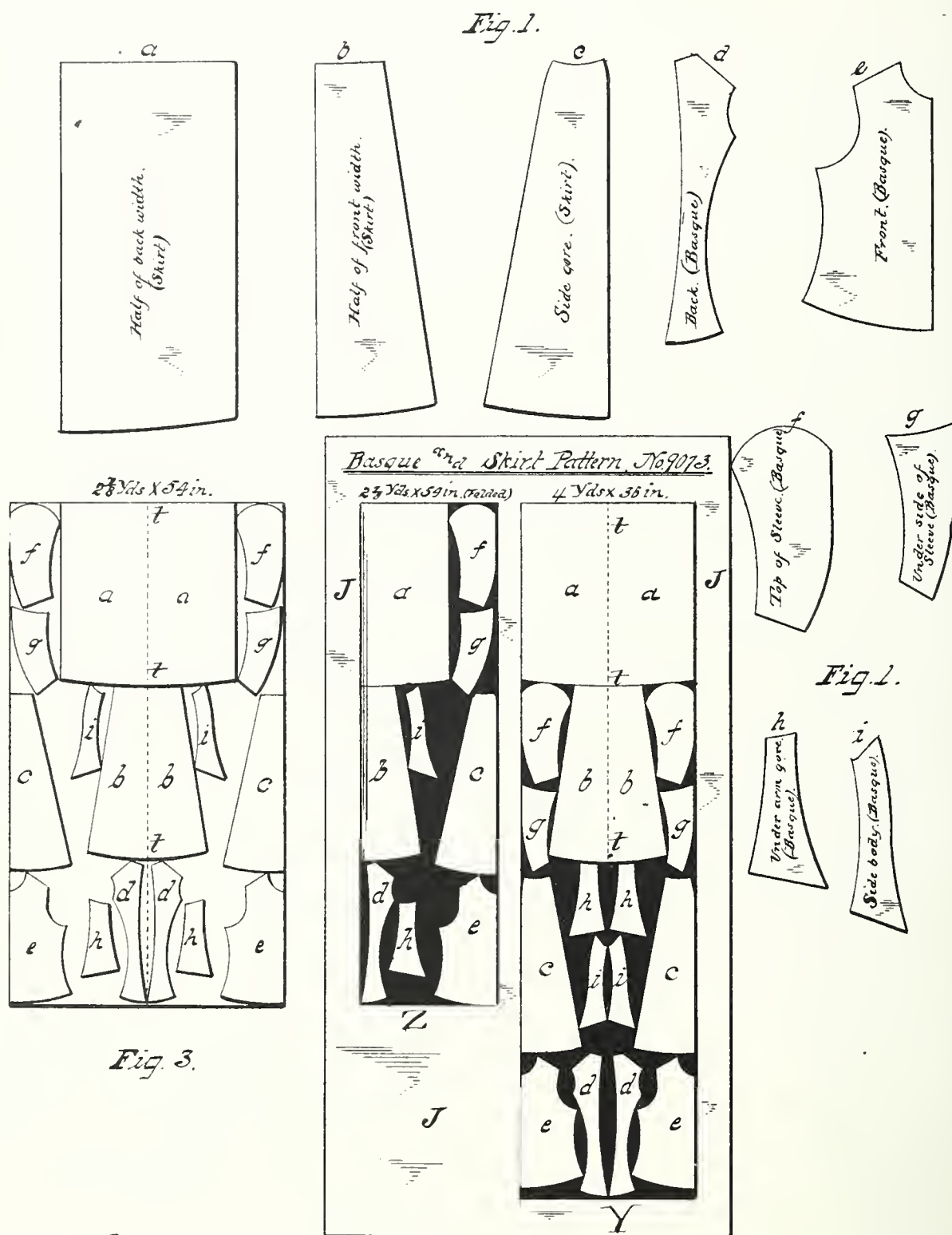
J. BONSALE TAYLOR,
JOHN JOLLEY, Jr.

(No Model.)

C. S. PUSEY.
PATTERN FOR GARMENTS.

No. 347,888.

Patented Aug. 24, 1886.



WITNESSES:
Ans. Nolan
Isaac W. Oesperinger.

INVENTOR
Caroline S. Pusey,
per Joshua Pusey,
Att'y

UNITED STATES PATENT OFFICE.

CAROLINE S. PUSEY, OF PHILADELPHIA, PENNSYLVANIA.

PATTERN FOR GARMENTS.

SPECIFICATION forming part of Letters Patent No. 347,888, dated August 24, 1886.

Application filed February 4, 1886. Serial No. 190,758. (No model.)

To all whom it may concern:

Be it known that I, CAROLINE S. PUSEY, a citizen of the United States, residing in the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Patterns for Garments, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The object of this invention is to facilitate the cutting out of stuffs for garments from paper patterns.

The invention consists in the combination, with the patterns, of diagrams representing, on a reduced scale, the length and breadth of the material of which the garment is to be cut, with the several patterns laid down thereon in suitable predetermined positions, directions, and relations, whereby the material may be cut out from the full-size patterns in accordance with the disposition of the said patterns as laid down on the diagrams.

The ordinary patterns for garments, which, as is well known, are an extensive article of manufacture and sale, are usually made up of a number of separate pieces of paper of suitable form, and sometimes the several parts of a pattern are printed in outline, in broken lines crossing each other, on a single sheet of paper, from which tracings are to be made with what is known as a "tracing" or "copying" wheel. Now, it requires considerable time and the exercise of judgment in order to lay down these patterns on the material so that they will, in the first place, when cut out, use the material economically, and, secondly, so as to avoid mistakes in laying the pieces, or certain of them, in the proper position and direction, such as the nature of the material shall require, whether owing to the latter being figured or presenting different appearances when viewed from different directions. It is necessary, in practice, for the manufacturers of these patterns, in stating (as is usually done) the number of yards required for the several widths of material, to allow a liberal margin for lack of judgment and forethought, and for the possible, if not probable, mistakes of those who may use the patterns in cutting out the material for the garment to be made. It is, indeed, not an unusual occurrence, when mistakes are made in laying down the patterns,

for the necessity to arise of procuring a further quantity of stuff than was stated to be, or thought to be, sufficient in the first place. By means of my invention these objections are obviated, and the purchaser of a particular pattern is thereby enabled to know precisely the exact quantity of material required for making up the particular garment.

In Figure 1 of the annexed drawings, *a b c*, &c., represent the several parts or pieces of a basque and skirt pattern, which I have selected at random to illustrate my invention. Figs. 2 and 3 represent these parts as printed or laid down in suitable positions with relation to each other and the length and width of the material, and with the greatest economy of space, in diagrams upon a reduced scale upon a card or sheets of paper.

In carrying out my invention in an expeditious manner I measure off a space upon the floor or a long table, the width of which space is equal to that of one of the usual widths in which dress material is made—say thirty-six inches. I next arrange upon the said space, beginning at one end thereof, the several pattern-pieces *a b c*, &c., in proper position, bearing in mind also the directions in which the pieces should run when the pattern is cut out from the material; and when all said pattern-pieces have been arranged properly and to the best advantage and economy, I then make a small diagram—such as *Y*, Fig. 2—representing the material and the patterns so arranged. The length of the material required for this width (thirty-six inches) is four yards, or four times the width. I then proceed and measure out another width upon the floor—say fifty-four inches, Fig. 3—or the half of the same, *Z*, Fig. 2, in like manner, and proceed in a similar way, and so on, as may be desirable, as to other widths.

Fig. 3 is substantially the same as *Z*, Fig. 2, except that in the latter case only one of each of the duplicate patterns is used, the material being supposed to be doubled over lengthwise.

As is well understood by those familiar with the art to which my invention appertains, the "back width," *a*, of the skirt and the "front width," *b*, thereof are not cut on the line of folding of the material when doubled over, nor are they cut out when not doubled over—that

is to say, these two pieces, in the latter ease, are not cut on the dotted line *t t*, Figs. 2, Y, and 3, but are cut double the width of the one pattern-piece. I finally print the diagram or diagrams on a card, J, Fig. 2, as shown, adapted to accompany the particular pattern and to be used as a reference in connection therewith; or I sometimes print said diagrams upon one of the pattern-pieces. The length of the material required for the fifty-four-inch width, Fig. 3, and Z, Fig. 2, is two and seven-eighths yards.

It will be observed that the arrangement of the patterns of Y differs considerably from those of Z. Such difference of arrangement is necessary for the foregoing various stated widths, in order to secure the shortest possible length of the material for those widths, and for other widths, which I have not deemed it necessary to illustrate, in like manner. In this way a person having the diagrams before her or him is enabled to learn at once exactly how much stuff is required for making up the garment, and how the patterns are to be laid thereon without any reasonable danger of any but inexcusable mistakes. Also, by using my invention the pattern and the required amount of stuff may be supplied to the dress-maker or tailor, and thus avoid a not infrequent occurrence—that is, the dress-maker, being unable or unwilling to take the time to properly arrange the patterns to the best advantage, uses considerably more material than the pattern really requires.

By the use of my device one can purchase the separate pieces with accompanying diagrams, and the precise number of yards of the material known to be requisite, and supply the same to the dress-maker, with the knowl-

edge that the latter cannot properly require a greater or further quantity of material in order to make up the particular garment.

It will of course be understood that in the annexed drawings the pattern-pieces *a b c*, &c., Fig. 1, although substantially correct as to shape and relative proportions, are greatly smaller in dimensions proportionally to those laid down in the diagrams, Figs. 2 and 3, than the full-size patterns. The several pieces in said diagrams are drawn substantially to a scale, as also, of course, the rectangles representing the length and width of the material, although, it may be observed, it is not essential that the diagrams should be strictly to a scale, the purpose being to serve as a substantially-correct index, so to say, to direct how the pattern-pieces are to be laid, the number of yards in length of the particular width being of course stated on the patterns or the accompanying diagrams.

Having thus described my invention, I claim as new and useful and desire to secure by Letters Patent—

A compound pattern for cutting out garments, consisting of the full-size pattern-pieces necessary to cut out a garment and a second sheet having a diagram thereupon showing the proper positions to be occupied by the said pieces upon the length of fabric to be cut, substantially as described.

In testimony whereof I have hereunto affixed my signature this 3d day of February, A. D. 1886.

CAROLINE S. PUSEY.

Witnesses:

GRACE E. PUSEY,
W. W. DOUGHERTY.

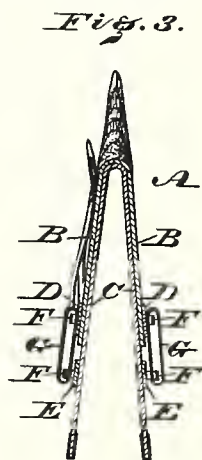
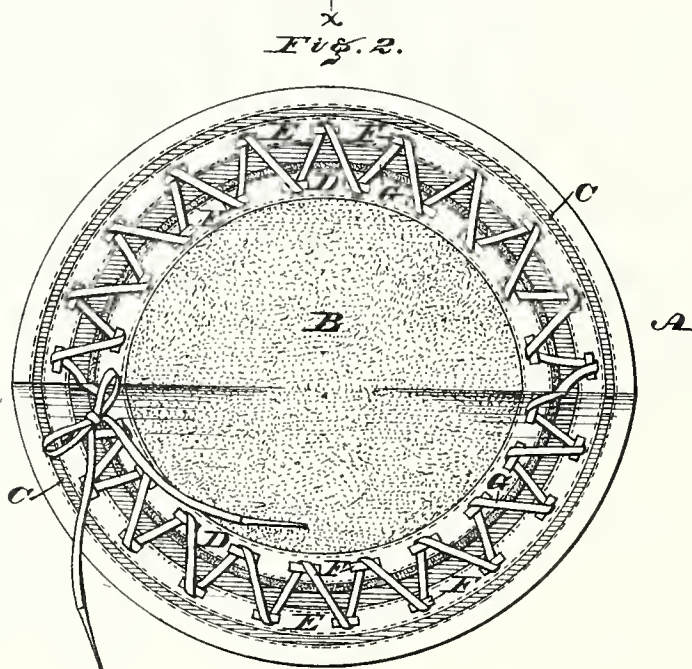
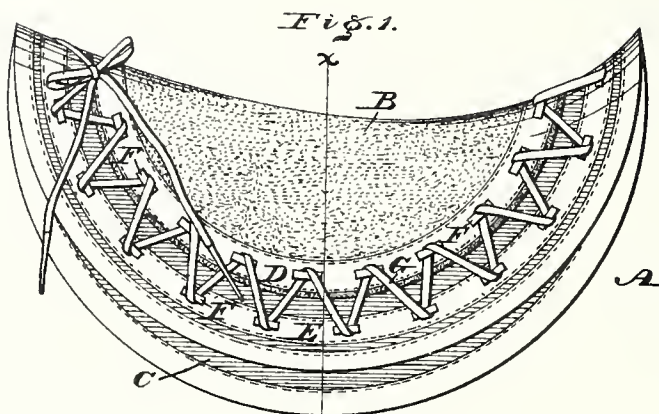
(No Model.)

H. EINSTEIN.

DRESS SHIELD.

No. 349,149.

Patented Sept. 14, 1886.



WITNESSES:

R. P. Grant,
W. F. Reichert

INVENTOR:

Henriette Einstein
BY John D. Diersheimer
ATTORNEY.

UNITED STATES PATENT OFFICE.

HENRIETTE EINSTEIN, OF PHILADELPHIA, PENNSYLVANIA.

DRESS-SHIELD.

SPECIFICATION forming part of Letters Patent No. 349,149, dated September 14, 1886.

Application filed November 23, 1885. Serial No. 183,612. (No model.)

To all whom it may concern:

Be it known that I, HENRIETTE EINSTEIN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Dress-Shields, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a side elevation of a garment shield and fastening embodying my invention. Fig. 2 represents a top or plan view thereof. Fig. 3 represents a section thereof in line *xx*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a shield formed of absorbent and repellent materials, whereby perspiration is prevented from reaching the garment, and the parts may be readily separated for washing or cleansing purposes.

It further consists of a novel fastening.

Referring to the drawings, A represents a shield formed of an upper piece or pad, B, of fabric or material of an absorbent nature, and an under piece or pad, C, of fabric or material of a non-absorbent or repellent nature fastened to said pad B. The shield is shaped to conform with the armpit, and it will be seen that when it is worn the perspiration is absorbed by the pad B, and prevented from reaching the pad C. It will also be seen that the pads are formed of independent pieces of material, whereby they may be separated and washed, as desired, and the shield kept clean, as is evident.

Connected with the piece B is a tape, D, and with the piece C is a tape, E, said tapes being properly sewed or otherwise fastened to the respective pieces near the edges thereof. Loops F of fabric are formed with or secured to the tapes at intervals, and through the same is

reeved a lacing, G, whereby the two pieces are connected without the employment of clips, eyelets, or other metallic fastenings, and provision is made for adjusting the edges of the pieces relatively to each other, or the connection of said pieces simply by taking up or slaekening the lacing, it being noticed that the loops are alternate in the different pieces so that the lacing extends zigzag; but to this I do not limit my invention. When the adjustment is completed, the ends of the lacing are tied or knotted, preventing separation of the parts.

When it is desired to disconnect the pieces or separate the edges thereof, the lacing is withdrawn from the loops, or properly loosened therein, according to the requirements.

In lieu of tapes, I may employ the bindings of the pieces as holders of the loops, or fasten the loops directly to the pieces.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A garment-shield formed of absorbent and non-absorbent pads which are connected by a detachable fastening consisting of loops and lacing, substantially as described.

2. A garment-shield having an upper absorbent pad and an under non-absorbent pad, the pads being connected by a lacing passing through loops on both pads, substantially as described.

3. A garment shield having an upper absorbent pad and an under non absorbent pad, the absorbent pad being of less diameter or size than the other, and connected to the same by a lacing passing through loops on the surface of both pads, substantially as described.

HENRIETTE EINSTEIN.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. GRANT.

(No Model.)

A. H. CAMPBELL.

SOAP RECEPTACLE.

No. 354,683.

Patented Dec. 21, 1886.

FIG. 1.

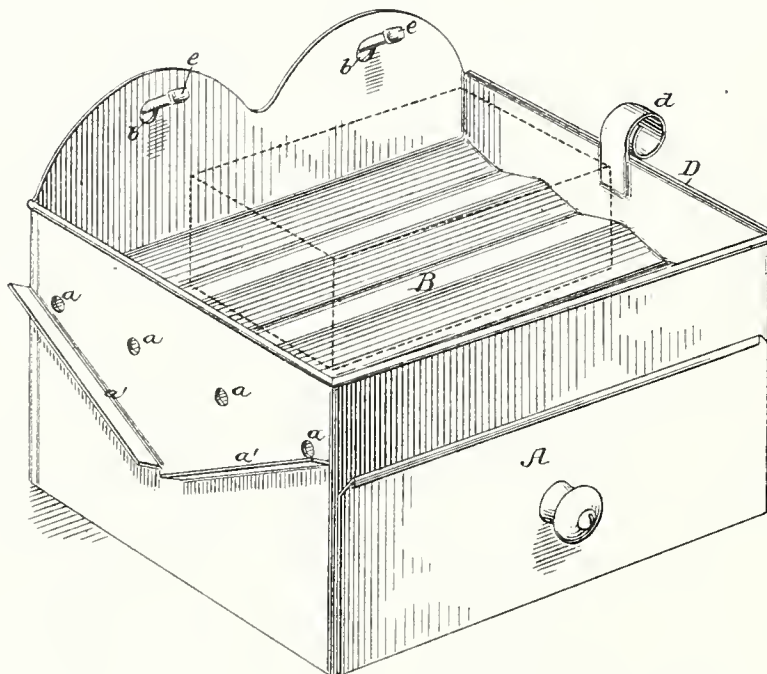
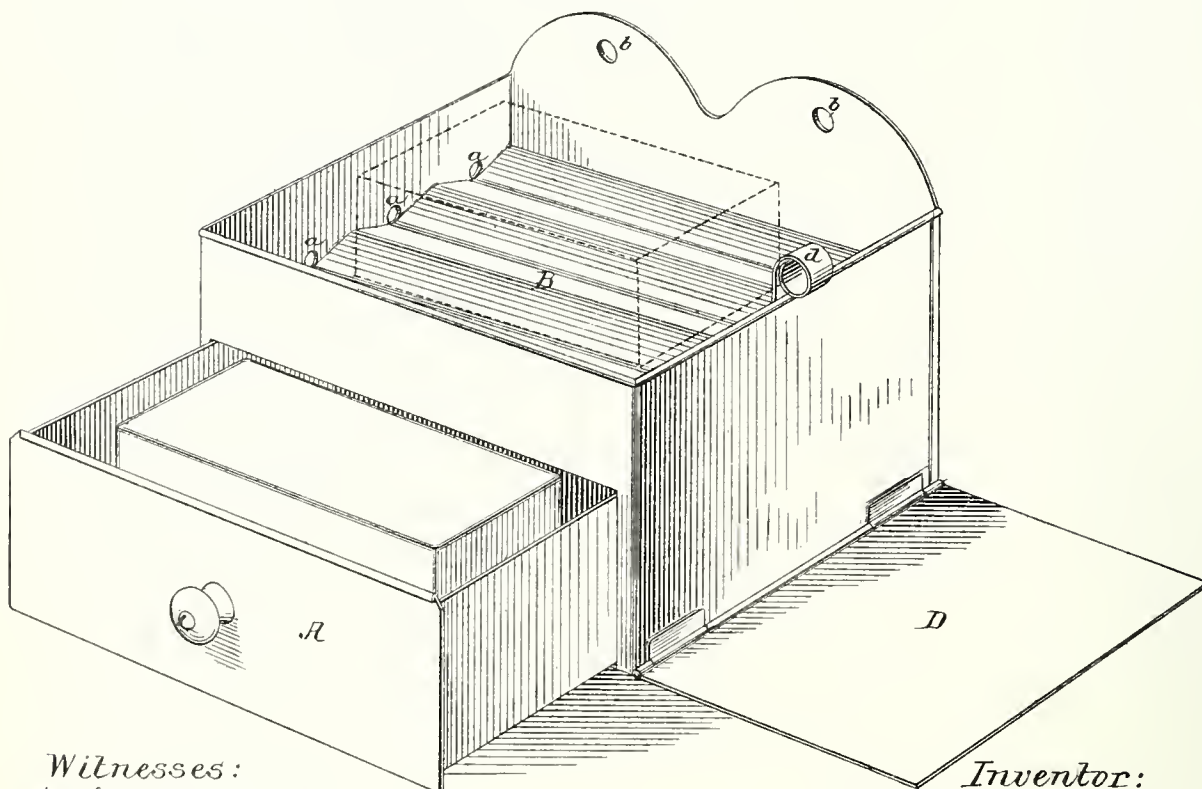


FIG. 2.



Witnesses:
William D. Counce.
John E. Parker.

Inventor:
Angeline H. Campbell
by her Attorneys
Howson & Sons

UNITED STATES PATENT OFFICE.

ANGELINE H. CAMPBELL, OF PHILADELPHIA, PENNSYLVANIA.

SOAP-RECEPTACLE.

SPECIFICATION forming part of Letters Patent No. 354,683, dated December 21, 1886.

Application filed September 1, 1886. Serial No. 212 382. (No model.)

To all whom it may concern:

Be it known that I, ANGELINE H. CAMPBELL, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented
5 an Improved Soap-Receptacle, of which the following is a specification.

My invention consists of an improved and convenient construction of soap dish or receptacle, more especially adapted for use in the
10 kitchen and where two kinds of soap have to be used, one for the cleaning of dishes, &c., and the other for the cleaning of knives and other utensils.

In the accompanying drawings, Figure 1 is
15 a perspective view of my improved soap-dish as it hangs on the wall, preferably over the sink, where it is convenient for the washing of dishes, &c., and Fig. 2 is a perspective view of the receptacle taken down from its sus-
20 pending hooks or nails and laid on the table, ready for use for the cleaning of knives and other utensils.

I prefer, for convenience and economy, to make the soap-dish of tin or other sheet metal,
25 although it may be made of wood, if desired, and I make it of the rectangular form shown in the drawings, with a drawer, A, at the lower part to contain sand-soap or similar material for the cleaning of knives, &c., while immediately over the drawer is a partition, B,
30 which, with the sides of the casing, forms a dish for the soap for general washing and cleaning purposes. I prefer to make this partition B of the corrugated form illustrated in
35 the drawings, and to arrange it at an inclination, so that water which drips from the soap will not collect in the bottom, but pass off through openings *a* at the lower end of the inclined partition, and there drop down into the
40 sink below. Inclined gutters *a'* may be secured to the outside of the soap-dish below these openings *a* to direct the escaping water toward one point.

The back plate of the casing is preferably

carried up some distance above the height of
45 the front and sides, and is provided with openings *b*, for convenience in hanging the soap-receptacle on hooks or nails *c* on the wall.

At the end of the receptacle opposite that in which are the openings *a*, I provide a shelf
50 or plate, D, which is hinged to the bottom of that side of the casing, while at the upper edge I provide a suitable spring-catch, *d*, so that when the shelf D is turned up on its hinge it will be caught and held by the spring-catch
55 *d*, as shown in Fig. 1.

Under ordinary circumstances the soap-dish remains hung upon the wall, with the drawer closed and the shelf D turned up in the closed position. The soap in the top re-
60 ceptacle is thus within convenient reach for use in washing dishes, &c., in the sink below.

When knives or utensils of a similar character are to be cleaned, the soap-dish is taken down from the nail and laid on the table. The
65 drawer A is opened or pulled out, and the shelf D is turned down to the position shown in Fig. 2 on the table, so that in cleaning, the points of the knives, &c., can be laid upon this plate or shelf, while the sand-soap in the
70 drawer is in convenient proximity for use. The shelf D thus protects the table from dirt, which would otherwise be rubbed into it in cleaning the knives.

I claim as my invention—

1. A soap-dish having a hinged shelf, D, at one end, as and for the purpose described.
2. A soap-dish provided at one end with a shelf, D, hinged at the bottom, and a catch on the upper edge to retain the shelf in the closed
80 position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANGELINE H. CAMPBELL.

Witnesses:

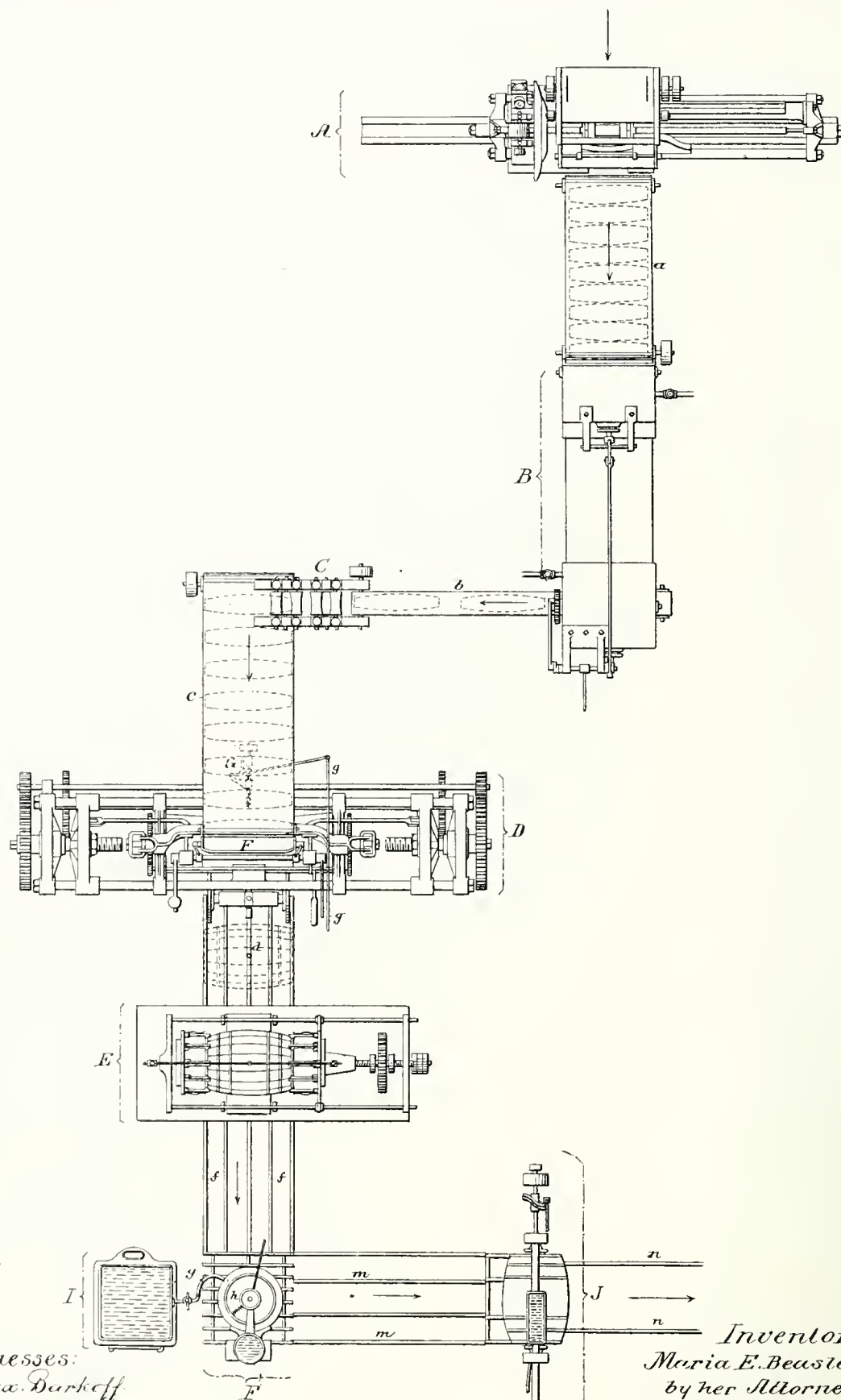
WILLIAM D. CONNER,
JOSEPH H. KLEIN.

(No Model.)

M. E. BEASLEY.
PROCESS OF MAKING BARRELS.

No. 352,850.

Patented Nov. 16, 1886.



Witnesses:
Alex. Darkoff
William J. Davis

Inventor:
Maria E. Beasley
by her Attorneys,
Howson & Son

UNITED STATES PATENT OFFICE.

MARIA E. BEASLEY, OF PHILADELPHIA, PENNSYLVANIA.

PROCESS OF MAKING BARRELS.

SPECIFICATION forming part of Letters Patent No. 352,850, dated November 16, 1886.

Application filed December 21, 1885. Serial No. 186,267. (No model.)

To all whom it may concern:

Be it known that I, MARIA E. BEASLEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented a certain
5 Improved Process of Making Barrels, of which the following is a specification.

The object of my invention is to manufacture barrels, casks, or kegs more expeditiously and at less expense than by the methods now in use.

10 The accompanying drawing is a plan view of a barrel-making plant adapted for carrying out my improved process of manufacture.

The lumber is first cut into proper size for staves, and the stave-blanks are subjected to the action of the machine A, which I prefer to construct in the manner shown in the Letters Patent granted to me June 10, 1884, No. 300,194, although any other form of stave-cutting machine, by which the staves are formed while
20 bent to the shape which they are to assume in the finished barrel, may be used. The stave is delivered by a cutting-machine onto an apron, *a*, and is thereby conveyed to a steaming-box, B, which is so constructed that the staves will be traversed slowly through the box, and be thereby thoroughly steamed, before being delivered onto an apron, *b*, at right angles to the box. This apron conveys the hot staves to the bending and forming rolls C, whereby they are caused to assume the proper form, and are delivered onto the apron *c*, which deposits the staves in the hopper F of a setting-up machine, D, which I prefer to construct in accordance with the patent granted to me June
35 10, 1884, No. 300,193. The staves are fed continuously and rapidly from the steaming-box to the bending-rolls, and from the latter to the setting-up machine, so that the staves are set up while still hot and retaining the shape given them by said bending-rolls. This is an essential feature of my invention, as the staves are readily forced into proper position and retained by the truss-hoops of the setting-up machine when the latter acts upon the staves while they
45 are still hot and retain the shape given to them by the bending-rolls.

The setting-up machine serves to apply the staves to the heads of the barrel, and to confine them in proper position by a number of hoops, and with the setting-up machine I also preferably combine an auger, G, thrown into and out of action by a rod, *g*, and serving to bore a

bung-hole in one of the staves after the barrel has been set up.

The setting-up machine delivers the barrel 55 onto skids or ways *d*, by which it is directed to the hooping-machine E, whereby the hooping of the barrel is completed.

If the barrel is to be painted and sealed, it is discharged from the hooping-machine onto 60 ways *f*, and conveyed to a machine, F, for painting the heads of the barrel. Adjacent to this machine is a vessel, I, in which glue, pitch, or any suitable cement is kept in liquid form, this vessel having a flexible discharge-pipe, *g*. 65 The barrel is turned on end in the head-painting machine F, and a small quantity of glue or cement is introduced into the barrel through the bung-hole. While the brush *h* of the machine is painting the upper head of the barrel the glue or cement is internally sealing the joints of the lower head, and when the operation of painting the upper head is completed the barrel is reversed and the opposite heads are painted and sealed in the same manner, the 75 supply of glue or cement introduced into the barrel being sufficient to seal both heads. From the head-painting machine F the barrel passes along ways *m*, to a machine for painting the sides of the barrel, this machine having a 80 reciprocating brush which applies the paint while the barrel is being rotated, the painted barrel being finally directed by ways *n* to the drying-room.

As in carrying out my improved process of 85 making barrels the staves are conveyed and the barrel directed from one machine to another without handling, I am enabled to dispense with much of the labor now required in making barrels, the manufacture being thereby 90 both expedited and cheapened.

I claim as my invention—

1. The mode herein described of making barrels or like vessels, said mode consisting in first cutting the staves to the proper form, then 95 steaming said staves, then, while they are hot, bending or shaping the same, and then, while bent and still hot, setting them up and securing them around the heads, all substantially as specified.

2. The mode herein described of making barrels or like vessels, said mode consisting in first cutting the staves to the proper form, then steaming said staves, then, while they are hot,

100

bending or shaping the same, then, while bent and still hot, setting them up and securing them around the heads, and finally completing the hooping of the barrel, all substantially as set forth.

5 3. The mode herein described of making barrels or like vessels, said mode consisting in first cutting the staves to the proper form, then steaming the staves, then, while they are hot, bending or shaping the same, then, while bent and still hot, setting them up and securing them around the heads, then completing the hooping of the barrel, and finally introducing glue or

other cement into said barrel, and supporting the barrel on end while painting the heads, 15 whereby the simultaneous painting and sealing of the heads is effected, all substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two sub- 20 scribing witnesses.

M. E. BEASLEY.

Witnesses:

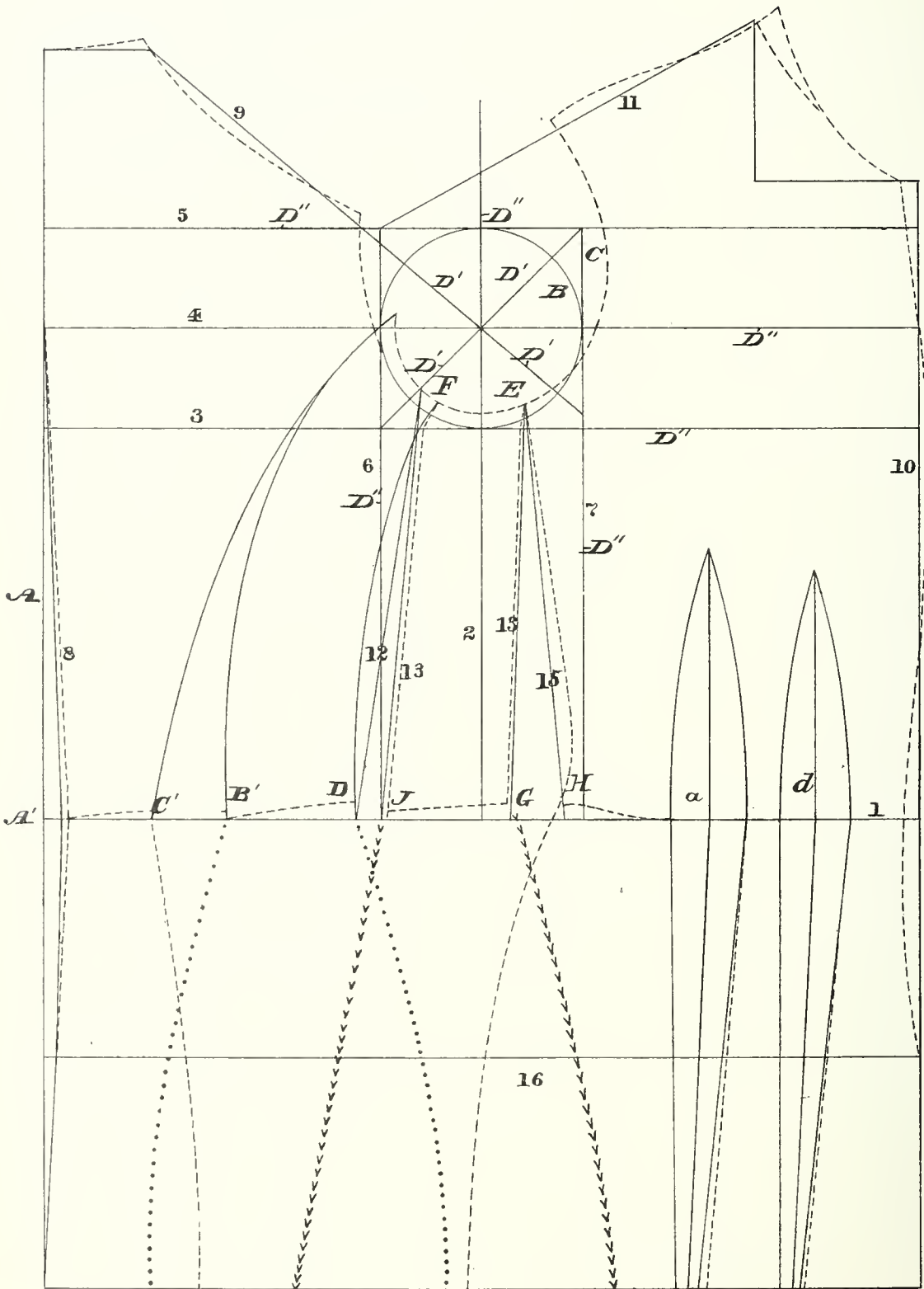
WILLIAM F. DAVIS,
HARRY SMITH.

(No Model.)

E. GARTLAND.
CHART FOR DRAFTING GARMENTS.

No. 355,160.

Patented Dec. 28, 1886.



WITNESSES:

R. P. Grant,
H. F. Fischer

INVENTOR:

Elizabeth Gartland
BY *John A. Diederichsen*
ATTORNEY

UNITED STATES PATENT OFFICE.

ELIZABETH GARTLAND, OF PHILADELPHIA, PENNSYLVANIA.

CHART FOR DRAFTING GARMENTS.

SPECIFICATION forming part of Letters Patent No. 355,160, dated December 28, 1886.

Application filed February 4, 1886. Serial No. 190,793. (No model.)

To all whom it may concern:

Be it known that I, ELIZABETH GARTLAND, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Drafting Charts for Patterns of Garments, which improvement is fully set forth in the following specification and accompanying drawing, in which the figure shown represents a chart with drafted pattern in dotted lines.

The method of constructing the chart is as follows: All measurements of the body are taken with the arm-hole as the center or basis. Ten inches from the lower edge of the sheet A of paper on which the pattern is to be drafted draw line 1 the entire length of the square for waist-line. On line 2, drawn vertically from the center of line 1, make a dot at a distance above the waist-line corresponding to the under-arm measure, and draw the line 3 parallel to line 1, said line 3 being designed for bust-measure. With its center on line 2 draw the circle B, according to arms-eye measure, resting on line 3. Through the center of the circle draw line 4 parallel to line 3, the portion of said line 4 to the left of the circle being for width of back, and the portion to the right of the circle for the width of chest. Parallel to line 4 and tangent to the circle draw line 5, the shoulder-line ending thereon. The lines 6 and 7, which are parallel to line 2 and tangent to the circle, divide the back of the body from the front thereof.

The lines D' or slanting diameters of the circle are drawn at angles to the vertical line 2, one of said lines being at an angle of forty-five degrees thereto and the other at a little greater inclination, as shown in the figure, and are for the following uses: The end of the upper right-hand line where it touches line 5 is the lower end of the shoulder-line. The end of the lower left-hand line where it touches line 3 determines the front seam of sleeve. The end of the upper left-hand line marks where fullness at top of back shoulder begins.

From line 1 draw line 8 to point of width of back on line 4, extending the said line 8 the exact length of back-measure. From a point one-half inch to the right of line 8 and on

waist-line draw a line to the junction of lines 4 and 8, and from the upper end of extension of line 8 or back-measure draw a line to the right of line 8 for back of neck, which line is in length always one-sixth of neck-measure. From the end of the line just drawn draw a slanting line, 9, which will pass near the junction of lines 5 and 6, and connected with the diameter of the circle, which line 9 is the back shoulder-line. Now, dot for shoulder-measure and curve down to line 4, mark off on line 3 from line 8 the bust-measure, and draw line 10 parallel to line 2, said line 10 being for front line of waist. Now, draw a line one-quarter of length of neck-measure from the left of the upper point of line 10, then draw a line of same length perpendicular thereto, and from the upper end of this last drawn line draw line 11 (which is the front shoulder-line) to the junction of lines 5 and 6. Extend line 11 one-half inch to the right and slope to front neck. At half the distance between dot A', used for slope of back, and line 6 make dot B' for back of side body, and one and three-quarter inch to right of A' make dot C', and one-half inch to left of line 6 make dot D. Dot C' is for front of back, and D for front of side body. The dot E at junction of inside curve of circle and lower right end of diameter marks the top of front of side body and under-arm gore.

Line 12 is employed to find the front line of side body, and is obtained by drawing from dot D to dot F on curved line of arm-hole at intersection of slanting diameter. Line 13, for front line of under-arm gore, is drawn from dot E, on inside of curved line, three-quarter inch to right of line 2, down to dot G, which is the lower front of under arm gore and on waist-line.

From a little to the left of dot F draw line 14, for back of under-arm gore. The said dot F is three-fourths of an inch to left of line 2, and is at the same height with the top of the front of the under-arm gore down to waist-line.

Line 15, which is used to find back line of front body, is drawn from dot E to dot H, and line 16, which is for hip-measure, is drawn parallel to line 1 below the same.

Dots G, H, and I are on waist-line, the first marking the lower front of under-arm gore,

the second the back of front body, and the third the lower back of under-arm gore. Draw the curve for side body by placing the inside of curvature at dot B' on waist-line and let it touch back-line above line 3, and extend line into circle one-half inch, curve the line for arm from end of extended line around to touch line 4 on opposite side.

The curve for waist-line is made by beginning at the back-dart and sloping up one-half inch above line 1 toward line 3 and down again to back.

For darts, divide the space on waist-line 1 between lines 7 and 10 into three parts by lines *a* and *a'*, leaving about three inches between said lines. From points three-quarters of an inch from said lines on both sides and on waist-line draw curved lines to the top of darts, the rear dart being one-half inch higher than the front one.

The shortest part of shoulder is formed by placing point of square at top of perpendicular line of side neck and top of circle, make a mark at shoulder-measure, then curve from shoulder-line down to left of circle on line 4. Curve the fronts from dot E to H, and under-arm gore from dot E to G and F to J. Slope back-line from dot A' to bottom of line 8. The pattern outlines having been marked on the chart, as stated, they can be readily transferred by means of a tracing-wheel to paper, so that the material may be cut thereby and a perfect fit secured in accordance with the body measurements.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The system herein described of making a chart for patterns of garments, consisting in plotting thereon by means of a circle whose circumference is the proper arm-measurement of the garment to be patterned, and a waist-line distant from said circle the proper under-arm measurement, slanting diameters of said circle drawn at angles, substantially as described, and other lines connected with said circle, waist-line, and slanting diameters, all of the various body measurements, as set forth.

2. An improved chart for making patterns of garments, consisting of a chart having thereon as the basis for drawing the outlines a circle whose circumference is the proper arm-measure of the garment to be patterned, and a waist-line distant from the circle the proper under-arm measurement, and a series of slanting diameters, as described, and lines of the lengths of the various body measurements, all substantially as described.

3. A chart for drafting the outlines of patterns having thereon a circle with slanting diameters, substantially as described and shown, and lines tangential to said circle, and other lines parallel to said tangential lines, said circle having a circumference equal to the proper arm-measurement of the garment to be patterned, all substantially as and for the purpose set forth.

ELIZABETH GARTLAND.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. GRANT.

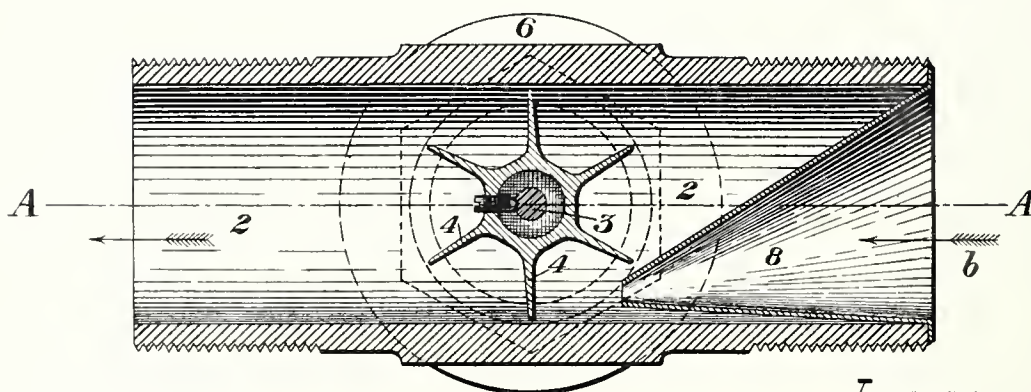
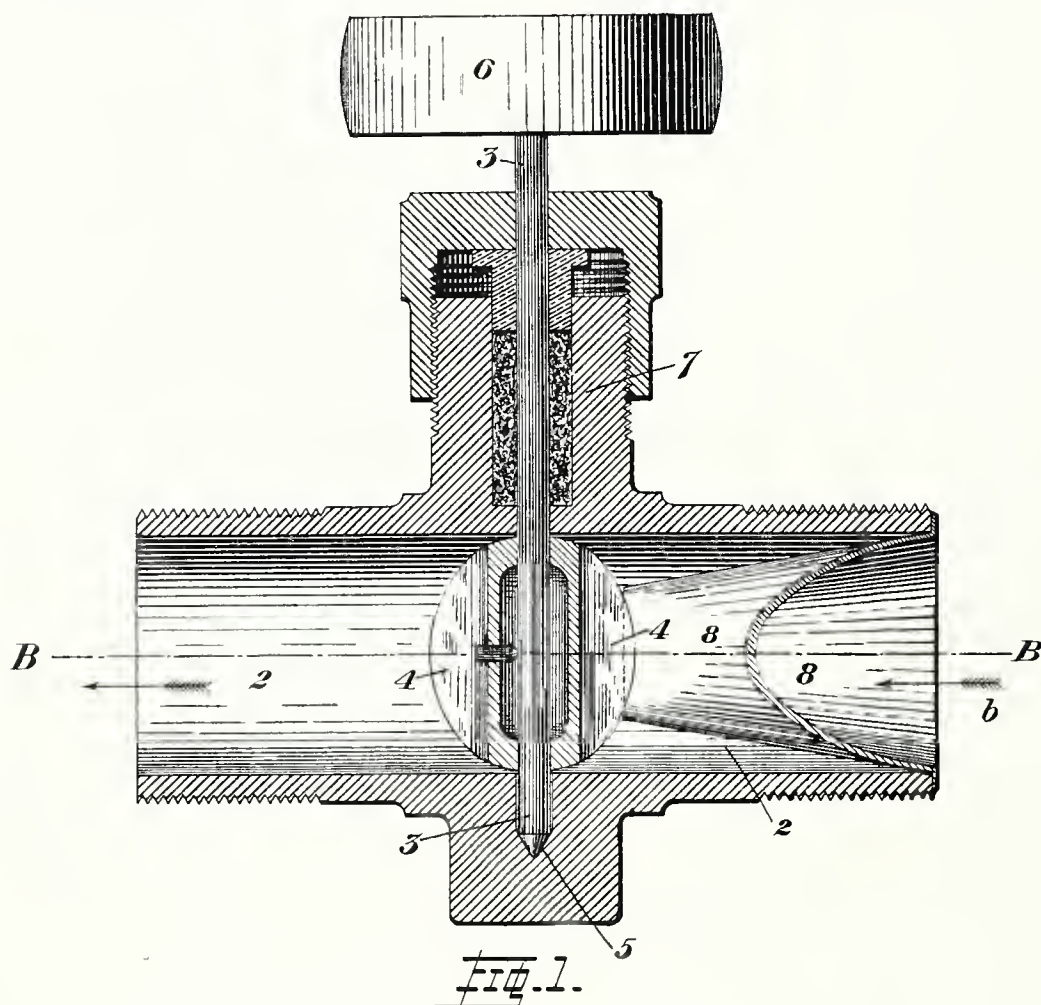
(No Model.)

A. H. LINDSAY.

ROTARY ENGINE.

No. 369,253.

Patented Aug. 30, 1887.



WITNESSES.

H. L. Gill
W. B. Corwin

FIG. 2.

INVENTOR.

Amelia H. Lindsay
by Baxwell & Ken-
ner Attorneys

UNITED STATES PATENT OFFICE.

AMELIA H. LINDSAY, OF PITTSBURG, PENNSYLVANIA.

ROTARY ENGINE.

SPECIFICATION forming part of Letters Patent No. 369,253, dated August 30, 1887.

Application filed April 8, 1887. Serial No. 234,119. (No model.)

To all whom it may concern:

Be it known that I, AMELIA H. LINDSAY, of the city of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Rotary Engines; and I do hereby declare the following to be a full, clear, and exact description thereof.

The primary object of my invention is to provide a rotary engine which is easily operated, so that it may be used successfully and economically with natural gas under pressure as a motive fluid, or with other fluids—such as water, air, or steam—to supply the motive power.

As heretofore constructed rotary engines have either been too complicated or too wasteful to be successfully used.

To this end my invention consists in a fan spherical in general outline and journaled in a tube or pipe, wherein it is subjected eccentrically to a blast of the motive fluid which rotates it.

My invention is embodied in the apparatus shown in the accompanying drawings, in which—

Figure 1 is a horizontal central section of the engine on the line A A of Fig. 2, and Fig. 2 is a vertical central section thereof on the line B B of Fig. 1.

Like symbols of reference indicate like parts in each.

In the drawings, 2 represents a tubular chamber or section of pipe, which is interposed in a line of natural-gas service-pipes, in which the flow of gas is in the direction of the arrow *b*.

3 is a rotary shaft which extends diametrically across the pipe 2, and 4 is a fan which is fixed to the shaft within the pipe. As shown in Fig. 2, the fan has vanes projecting from a central hub which fits over and is keyed to the shaft 3, and, as shown in Fig. 1, the outline of the vanes is spherical, so that they shall completely block the pipe. The shaft 3 is journaled in suitable bearings, 5, at one end, and at the other end it projects

outside the chamber 2, through a stuffing-box, 7, and is provided with a belt wheel or pulley, 6.

Back of the fan 4 in the chamber 2 is a funnel-shaped hollow shell, 8, whose larger end is of the same diameter as the pipe, and whose smaller end is set as near to the fan as possible, and is directed theretoward off the central line of the shaft 4, but a little above the bottom of the fan, so that the propelling-current of gas shall not escape through the crevice between the vanes and the inside of the pipe. Now, as the current of gas under pressure passes through the pipe it is concentrated by the funnel 8 upon the vanes and causes the fan and the shaft whereon it is fixed to rotate with a degree of force and rapidity depending upon the gas-pressure and the velocity of the gas-current. Owing to the fact that there is no dead-point at which the gas-current does not impel the fan, and because of the concentration of the current by the funnel 8, a very considerable power is imparted to the fan, and from a small pipe and a low pressure enough power can be obtained to run machinery of moderate size. Of course the power obtained depends upon the quantity and velocity of the gas which passes through the pipe, and when natural gas is used to supply the motive force it depends largely upon the distance of the engine from the wells.

The engine is adapted for a great variety of uses. It may be used in dwelling-houses and driven by natural gas from the service-pipes to supply power for running sewing-machines and other small articles of machinery, and with larger pipes or greater pressure it may be used in work-shops and factories to run lathes and other larger machines. It may be set in place either by interposing the chamber or section 2 directly in the service-pipe line, or a branch or by-pass may be tapped in the service-pipe and the section 2 interposed in the by-pass. The engine may thus be used without interfering with the use of the gas-line, in which the gas

will flow as uninterruptedly as when the engine is not interposed.

The form and proportions of the parts of the engine may be somewhat altered without
5 departing from the principle of my invention.

I claim as my invention—

In a rotary engine, the combination, with a rotary fan, spherical in outline, of a tubular chamber wherein the fan is journaled on an

axis transverse to the central line of the chamber, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 6th day of April, A. D. 1887.

AMELIA H. LINDSAY.

Witnesses:

JAMES H. PORTE,

THOMAS W. BAKEWELL.

(No Model.)

S. L. SINCLAIR.
CAR WHEEL.

No. 365,546.

Patented June 28, 1887.

Fig. 1.

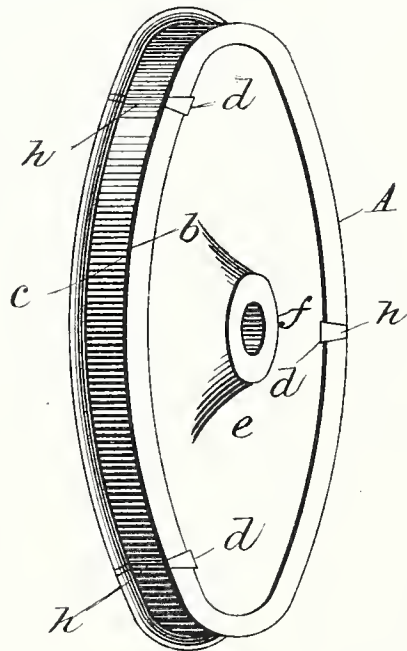


Fig. 2.

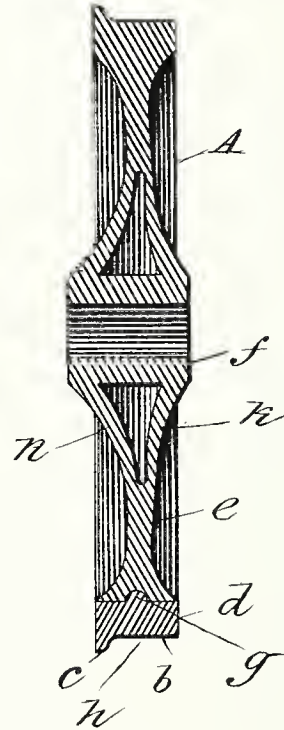


Fig. 3.

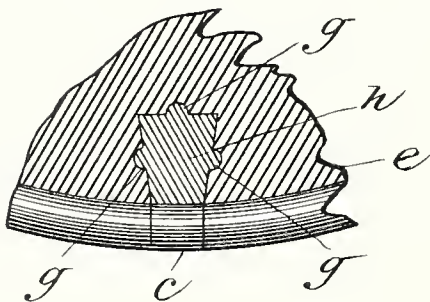
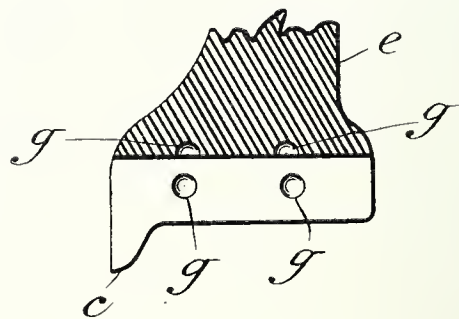


Fig. 4.



Witnesses:
James L Orr
Letitia Orr

Inventor:
Susan L Sinclair

UNITED STATES PATENT OFFICE.

SUSAN L. SINCLAIR, OF ALLEGHENY, PENNSYLVANIA.

CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 365,546, dated June 28, 1887.

Application filed April 5, 1887. Serial No. 233,814. (No model.)

To all whom it may concern:

Be it known that I, SUSAN L. SINCLAIR, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Car-Wheel, which will be readily understood from the following description, taken in connection with the accompanying drawings, wherein—

Figure 1 represents a perspective view of my car-wheel; Fig. 2, a transverse vertical section; Fig. 3, an enlarged sectional view of a portion of the rim or tread of the wheel, having therein a recess filled with cast steel or cast-iron; Fig. 4, an enlarged section of the wheel-rim with the cast-metal filling removed.

Among the various appendages of a railroad-car there are probably no parts of so much importance as its wheels. The multiplicity of forms and manner of making them indicate that the manufacture is attended with much uncertainty. In order to secure a degree of hardness enabling them to withstand rough usage and wear incident to prolonged travel on railroads, the periphery or tread of the wheels have been chilled, and to do this without producing in other portions of the wheel an unequal shrinkage and consequent strain is a difficulty not entirely overcome.

The means employed by my father, and set forth in Letters Patent of the United States No. 72,405, December 17, 1867, describes a method of producing car-wheels whereby the shrinkage and strain were in a great measure avoided. His invention consisted in the production of a car-wheel provided with a number of radial "recesses" in its periphery or tread, whereby a shrinkage or contraction thereof could take place without seriously affecting other parts of the wheel, and these recesses he proposed to fill with pieces of steel or other hard metal.

Letters Patent of the United States No. 315,080, April 7, 1885, were also granted to me for a method of filling recesses formed in the tread of car-wheels.

My present invention consists of a car-wheel as a new article of manufacture. The wheel A may be of any desirable size, shape, and weight, molded and cast in any suitable man-

ner within a "chill" to give requisite hardness to its periphery, including its tread *b* and flange *c*, which in this case are divided into two or more segments by means of transverse recesses *d*, but connected together by the web *e* of the wheel that joins the central hub or nave *f*. The several recesses *d* are dovetailed or made wider at their deepest part, and in the sides and bottom of each recess *d* are small pockets or cavities *g*, that may be of any desirable shape. The several recesses and cavities therein are filled by pouring molten steel or cast-iron therein after any manner known to the trade or art, whereby the segments of the periphery or tread *b* and flange *c* are united and given a complete unbroken contour by a filling, *h*, made even and smooth by any suitable process to fit the wheel for use.

The wheel A may be of that sort having its web formed of a single plate extending outward from its central hub to its rim; but I prefer to form the wheel A with a web consisting of double walls *k k*, which may either be plain or corrugated or sinuous, as a means of bracing the rim of the wheel in connection with its central hub.

I claim—

1. As a new article of manufacture, a car-wheel provided with a chilled or hardened periphery or tread having one or more transverse grooves or recesses filled and closed with metal cast therein.

2. A car-wheel provided with a chilled or hardened periphery or tread having one or more transverse grooves or recesses therein filled and closed with metal cast in the same and made to conform to the contour of the tread.

3. A car-wheel provided with one or more transverse grooves or recesses in its rim or tread and pockets or cavities in said recesses.

4. A car-wheel provided with a double-walled web and one or more transverse grooves or recesses in its periphery or tread filled with metal cast in the same.

SUSAN L. SINCLAIR.

Witnesses:

JOSIAH W. ELLS,
A. FRASER, LEGGATE.

UNITED STATES PATENT OFFICE.

CELIA C. SCHOELLER, OF PITTSBURG, PENNSYLVANIA.

ALTERATIVE REMEDY.

SPECIFICATION forming part of Letters Patent No. 370,976, dated October 4, 1887.

Application filed May 19, 1887. Serial No. 238,780. (No specimens.)

To all whom it may concern:

Be it known that I, CELIA C. SCHOELLER, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered a certain new and useful Improvement in an Herb Compound, of which improvement the following is a specification.

The purpose of my invention is to cleanse impure blood and to tone up the system; and it will be found beneficial in dyspepsia, kidney, liver, stomach, and skin diseases.

My medicine consists of the following ingredients, combined in the proportions stated, viz: gum-arabic, (*Gum acacia*,) two ounces; burdock-root, (*Lappa minor*,) two pounds; wild-cherry bark, (*Prunus Virginiana*,) one pound; sassafras-bark, (*Sassafras radialis cortex*,) one pound; blue-flag root, (*Iris versicolor*,) one-half pound; calamus-root, (*Calamus aromaticus*,) one-half pound; elecampane, (*Inula helenium*,) one pound; licorice-root, (*Glycyrrhiza radix*,) one-half pound; snake-root, (*Serpentaria Virginiana*,) one ounce; dog-wood bark, (*Cornus circinata*,) four ounces; prunes, one pound; dandelion, (*Taraxacum dens-leonis*,) one pound; honey, one pound; loaf-sugar, one-half pound; whisky, (*Spiritus frumenti*,) one quart; pickanicka-root (root of pipsissewa,) one pound.

The roots and barks above named I use, in preference, in their fresh and green condition. The ingredients above specified are thoroughly boiled, usually about nine hours, till reduced to an extract, water being added as required, but in such quantities that the extract made up of the above weights and quantities shall after boiling nine hours be reduced to a gallon. I prefer to add the whisky and gum-arabic in the last stage of the process, or about a half hour before the extract is removed from the stove. The average dose is a tea-spoonful three times a day.

What I claim, and desire to secure by Letters Patent of the United States, is—

The herein-described composition of matter to be used for blood and skin diseases, consisting of gum-arabic, burdock-root, wild-cherry bark, sassafras-bark, blue-flag root, calamus-root, elecampane, licorice-root, Virginia snake-root, dog-wood bark, prunes, dandelion, honey, loaf-sugar, whisky, pipsissewa-root, and water, in the proportions specified.

In testimony whereof I have hereunto set my hand.

CELIA C. SCHOELLER.

Witnesses:

WILLIAM L. PIERCE,
HILARY B. BRUNOT.

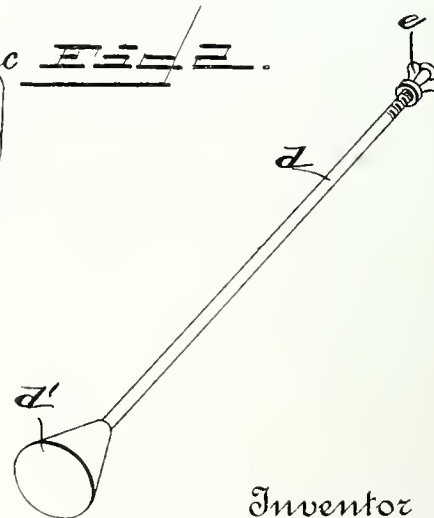
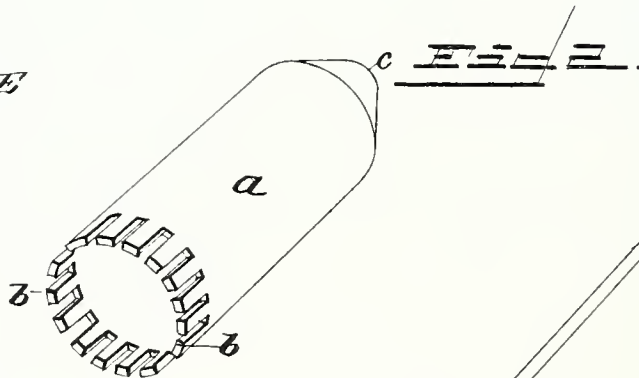
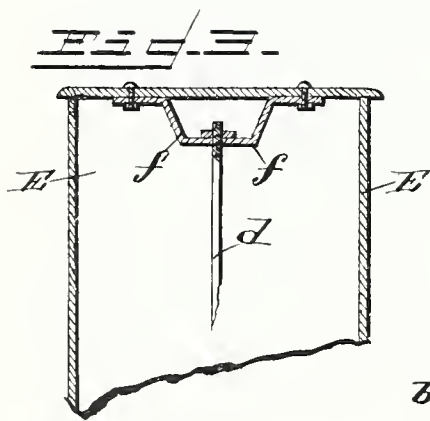
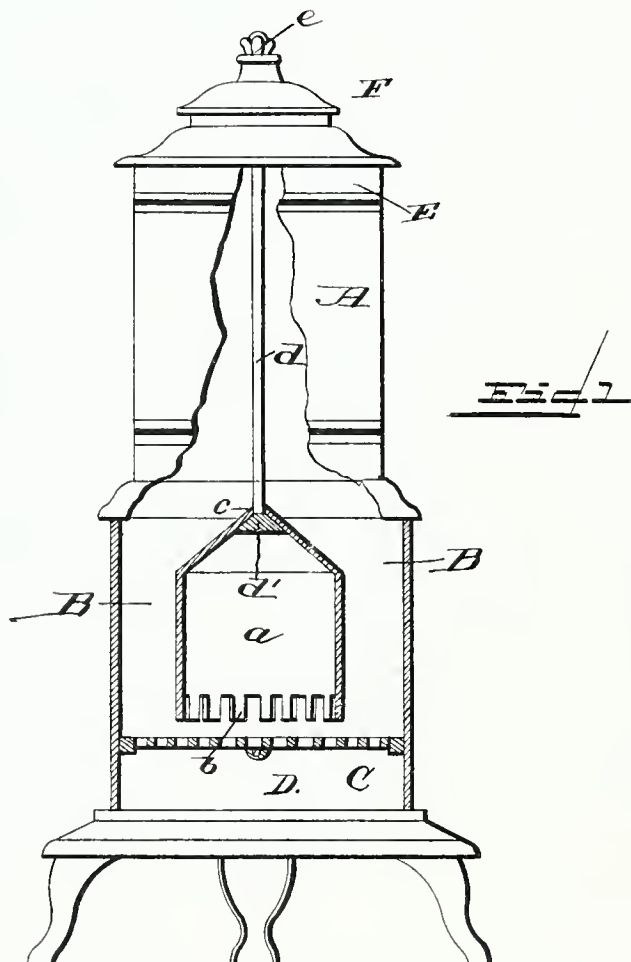
(No Model.)

D. F. McHENRY.

HEATER.

No. 373,082.

Patented Nov. 15, 1887.



Witnesses
W. H. Humphrey
J. W. Garner

Inventor
Dorcas F. McHenry

by *C. A. Howells*
Attorney

UNITED STATES PATENT OFFICE.

DORCAS F. McHENRY, OF EXCHANGE, PENNSYLVANIA.

HEATER.

SPECIFICATION forming part of Letters Patent No. 373,082, dated November 15, 1887.

Application filed May 19, 1887. Serial No. 238,803. (No model.)

To all whom it may concern:

Be it known that I, DORCAS F. McHENRY, a citizen of the United States, residing at Exchange, in the county of Montour and State of Pennsylvania, have invented a new and useful Improvement in Heaters, of which the following is a specification.

My invention relates to an improvement in heaters; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claim.

The object of my invention is to provide an attachment for heaters which will be useful in saving fuel, in facilitating the removal of ashes and slate, and in preventing the formation of clinkers.

In the accompanying drawings, Figure 1 is a sectional view of a heater of common form provided with my improved attachment. Fig. 2 is a detached perspective view of my improved attachment. Fig. 3 illustrates another mode of securing the lifting-rod to the top of the heater.

A represents a heating stove of common form, of which B represents the fire-pot, C represents the grate, D represents the ash-pit, E represents the top, and F represents the usual lid or cover in an opening in the top.

a represents a hollow cylindrical core or center, which is made of cast-iron, fire clay, both combined, or any other suitable material that will endure great and prolonged heat. The lower edge of this core or center is notched at b, and the upper end thereof is conical in shape, as shown, and provided at the apex of the core with an opening, c. This core or center is suspended in the center of the fire-pot of the heater, with the lower notched edge resting a few inches above the center of the grate, the diameter of the said core or center being considerably less than the diameter of the fire-pot, and the height of the said core or center being also less than the depth of the fire-pot in which it is placed, as shown in Fig. 1.

The core or center should conform to the shape of the fire-pot in which it is designed to be placed, and I therefore do not limit myself to making the core or center of cylindri-

cal form, as the same may be made angular or in any other form to adapt it for use in a stove or heater of any shape.

d represents a rod which suspends the core or center, and which is preferably made of iron or steel, and is passed through the opening c in the top of the core or center, and has its lower end provided with a conical-shaped enlargement or knob, d', adapted to fit snugly in the top of the core or center. The upper end of the said rod is passed through an opening in the stove-lid or cover F, and has a cap or nut, e, screwed onto it, as shown, thereby screwing the upper end of the rod to the lid, but enabling the said rod and the center or core attached thereto to be drawn upward by grasping the cap or nut, without elevating or removing the stove-lid, as will be readily understood.

In the event that the stove has no removable lid in its top, a bracket or bridge, f, such as shown in Fig. 3, may be screwed to the under side of the stove-top and provided with a central opening to secure the upper end of the rod d, as shown. Other means may also be employed to attach the rod to the stove and to raise the center or core, as I do not limit myself in these particulars.

The operation of my invention is as follows: The core or center is suspended in the fire-front, above the grate, as described, and a fire is built in the fire-pot entirely surrounding the core or center, which latter consequently fills a considerable space in the center of the fire-pot, and consequently reduces the quantity of fuel required to fill the same. It is known that the amount of air heated by contact with the fire-pot depends upon the superficial area of the same, and it follows that by providing a core or center for the fire-pot the diameter, and consequently the superficial area of the latter, may be increased, and the same can be heated by the same amount of fuel required by a much smaller fire-pot not provided with my improved core or center. The core or center radiates heat outwardly and upwardly from the outer side, and the inner surface radiates heat downward to the base of the heater, where it passes out through the notches b, being thereby divided into a number of currents

which ascend through the fire, causing a number of drafts, which accelerate combustion, as will be readily understood.

When it is desired to clean out the interior of the fire-pot, the core or center is raised, which causes the ashes, slate, cinders, and clinkers to be dislodged and shaken, and thereby caused to fall upon the grate, from whence they may be readily removed in the usual manner.

In the event of any clinkers becoming lodged in the grate the core or center can be lowered and given a slight rotary motion, thereby grinding and destroying the clinker by means of its lower notched edge. This lowering of the core is accomplished by turning the nut *e* so that it rides toward the end of the rod *d*, as will be understood.

Having thus described my invention, I claim—

The combination of the case *a*, closed at the top and open at the bottom, and having the notches *b* at its lower open end, and the suspending-rod *d*, having the conical enlargement *d'* at its lower end to engage with the top portion of the case, the said rod *d* being screw-threaded at its upper end and engaged by a nut after passing through the removable top cover of a stove, substantially as described.

DORCAS F. McHENRY.

Witnesses:

MONTRAVILLE McHENRY,
JANE M. E. GRAY.

(No Model.)

C. MAXWELL.

ICE SANDAL.

No. 371,270.

Patented Oct. 11, 1887.

Fig. 1.

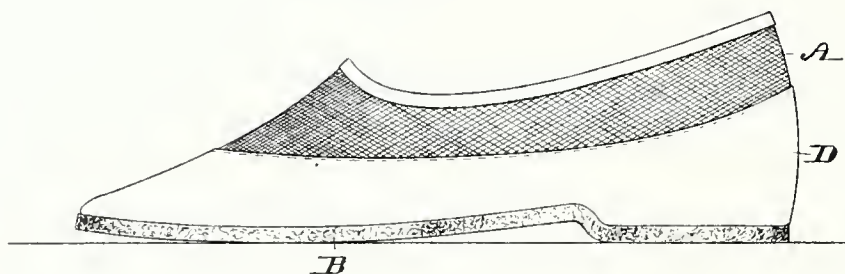


Fig. 2.

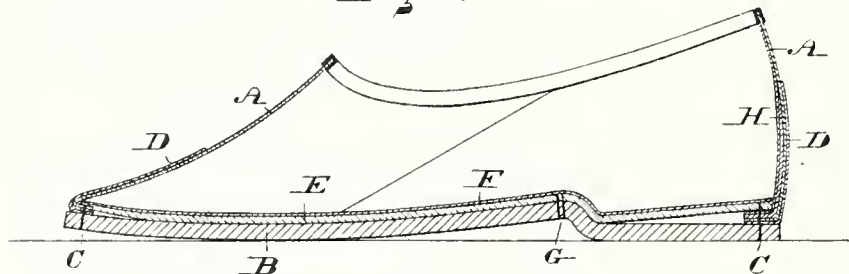


Fig. 3.

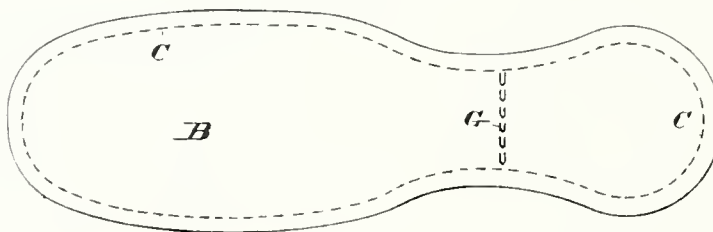
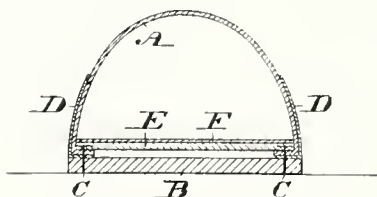


Fig. 4.



WITNESSES.

Th. Rolle
Ac P Grant

INVENTOR
Catharine Maxwell
BY *John A. Wiedersheim*
ATTORNEY

UNITED STATES PATENT OFFICE.

CATHARINE MAXWELL, OF PHILADELPHIA, PENNSYLVANIA.

ICE-SANDAL.

SPECIFICATION forming part of Letters Patent No. 371,270, dated October 11, 1887.

Application filed December 4, 1886. Serial No. 230,639. (No model.)

To all whom it may concern:

Be it known that I, CATHARINE MAXWELL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Ice-Sandals, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a side elevation of an ice-sandal embodying my invention. Fig. 2 represents a longitudinal section thereof. Fig. 3 represents a bottom view thereof. Fig. 4 represents a transverse section thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of an ice-sandal formed of an upper of knitted material, a felt sole, an insole, and rubber foxing, as will be hereinafter set forth.

Referring to the drawings, A represents the upper of the ice-sandal, the same being formed of knitted material known as "jersey-eloth," and B represents the sole, which is formed of felt and connected with the upper by stitches C.

D represents a foxing of rubber or other water-proof material, which extends around the upper and is secured to the sides of the same and fastened between the upper and sole by the stitches C.

E represents a leather insole, which is secured to the outer sole, B, by the stitches C; and F represents a lining of rubber, which is pasted or otherwise connected with the top of the insole.

In lieu of the stitches C, I may employ rubber or other element for securing the upper, foxing, and insole to the outer sole.

In order to preserve the contour of the heel and shank portion of the sole, the same is stitched through, as at G, at the place of junction of said heel and shank, thus preventing breaking down of the sole at said place.

A suitable counter, A, is provided for evident purposes.

The sole B is formed of felt molded to conform to the tread, shank, and heel of the boot or shoe over which the sandal is worn, whereby the sandal sets nicely and is comfortable to the foot. The jersey-eloth upper is warm in its nature, and, being soft and somewhat elastic, avoids pinching of the foot. The rubber foxing is light and flexible, and by its nature prevents ice, snow, or slush that may rise above the sole from reaching the fabric upper. The felt sole is approximately water-proof, and by its frictional nature prevents slipping on the ice. The lined insole protects the foot from any moisture that may pass through the outer sole.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein described sandal, consisting of a molded felt outer sole, an upper of jersey-eloth, a rubber foxing surrounding said upper, and an insole, said parts being combined and operating substantially as stated.

2. An improved ice-sandal, consisting of a molded felt outer sole, an upper of jersey-eloth, a rubber foxing surrounding said upper, a lined insole, and a counter, said parts being combined and operating substantially as described.

3. An ice-sandal having a sole formed of felt molded into shape, substantially as described, stitched through at the place of junction of the heel and instep, substantially as described.

CATHARINE MAXWELL.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. GRANT.

(No Model.)

A. CONNELLY.

FIRE ESCAPE.

No. 368,816.

Patented Aug. 23, 1887.

Fig. 1.

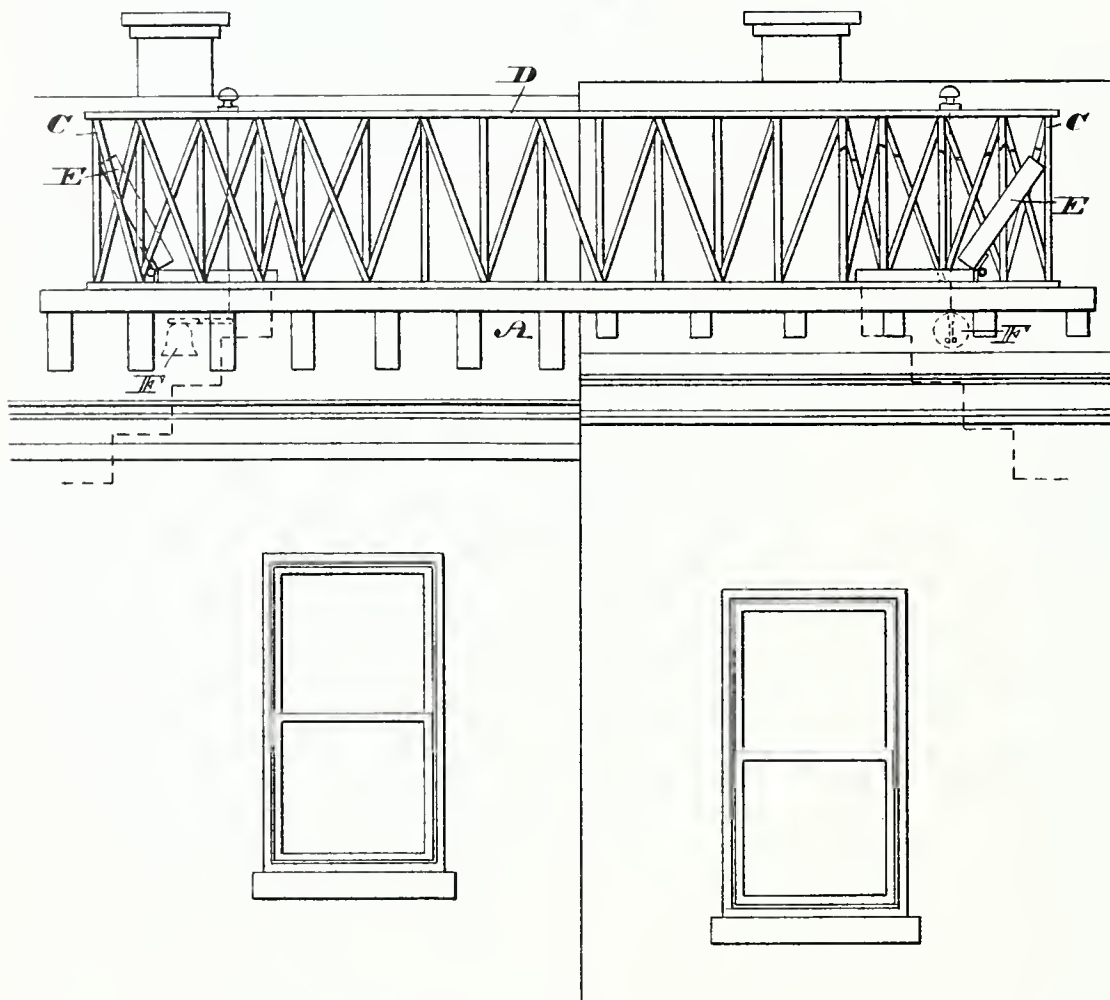
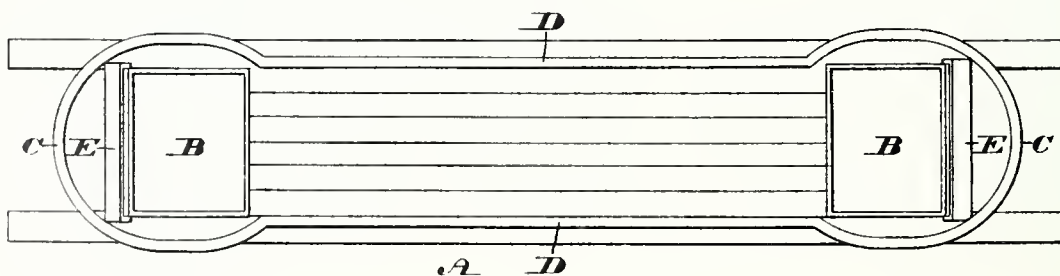


Fig. 2.



WITNESSES

Th. Rolfe.
Jas. F. Kelly.

INVENTOR

Anna Connelly.
BY *Diedersheim & Hines*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ANNA CONNELLY, OF PHILADELPHIA, PENNSYLVANIA.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 368,816, dated August 23, 1887.

Application filed May 13, 1887. Serial No. 238,057. (No model.)

To all whom it may concern:

Be it known that I, ANNA CONNELLY, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Fire-Escapes, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to improvements in fire-escapes; and it consists of a bridge surrounded by a railing and having openings in the ends of the floor thereof, as herein described, the said bridge being adapted to be placed on the roofs of adjoining or adjacent buildings, thereby permitting the ready and safe passage from one roof to the other.

It further consists in providing, in connection with said bridge, alarms adapted to be operated from said bridge and located substantially as described, whereby the inmates of either or both of the said buildings may be alarmed, as and for the purpose set forth.

Figure 1 represents a side elevation of a fire-escape embodying my invention. Fig. 2 represents a top or plan view thereof.

Similar letters of reference indicate corresponding parts in the two figures.

Referring to the drawings, A represents a bridge, in the floor of which at opposite ends are openings B.

C represents guards around the openings B, the same being continuous of the side rails, D, of the bridge A.

The bridge is located on the roofs of adjoining houses and secured thereto, the openings B being coincident with the scuttles or trap-doors E of the houses. Within each house is a bell, F, which is connected with any suitable knob, lever, or device located on the bridge so as to be operated therefrom.

It will be seen that in the event of fire the inmates of the burning building ascend to the scuttle or trap-door and open the same, whereby access is had to the bridge. They then pass

over the bridge to the opposite scuttle or trap-door, being prevented from falling owing to the end guards and side rails of the bridge. Should said scuttle or trap-door not be open, the respective bell is rung, whereby the occupants of the house are alarmed or signaled, and attention directed to the necessity of opening their scuttle or trap-door, and the latter is then opened from within, so that the people may pass through the same and enter the house, thus escaping from the burning building.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A fire-escape consisting of a bridge connectible with adjacent houses and having openings in the floor coincident with the scuttles or trap-doors of said houses, substantially as described.

2. A bridge with openings in its floor at opposite ends and guards around said openings, substantially as described.

3. A bridge with openings at opposite ends, rails on the sides, and guards around said openings, substantially as described.

4. A fire-escape consisting of a bridge connected with adjacent houses and alarms in said houses operated from said bridge, substantially as described.

5. A fire-escape consisting of a bridge with openings in its floor at opposite ends and the rails D and guards C surrounding the said bridge, substantially as described.

6. A fire-escape for the purposes named, consisting of a bridge with openings in its floor at each end thereof and provided with alarms adapted to be operated from said bridge, substantially as described.

ANNA CONNELLY.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. JENNINGS.

(No Model.)

A. V. ANDREWS.
BED PAN.

No. 364,078.

Patented May 31, 1887.

FIG. 1.

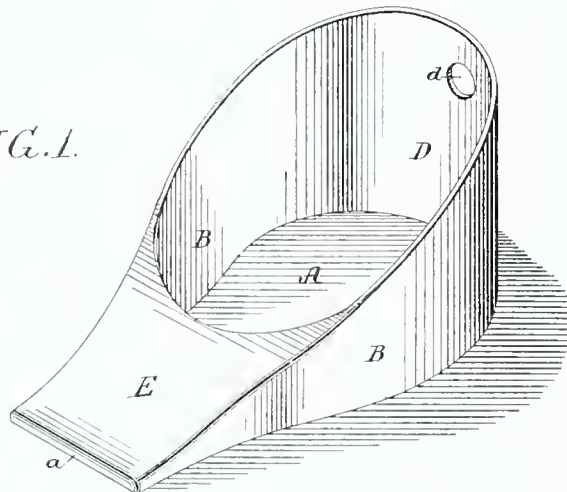


FIG. 2.

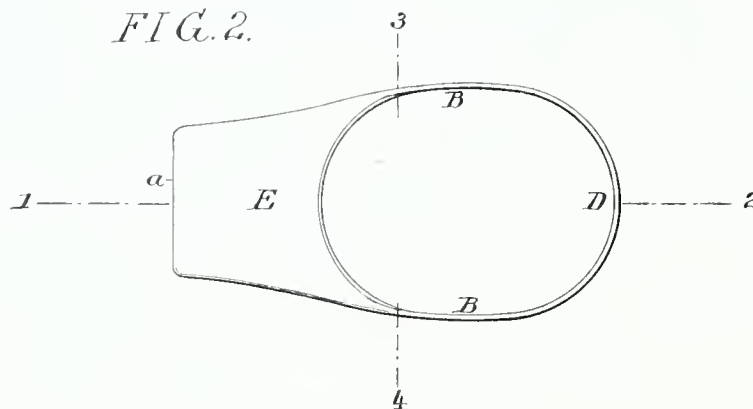


FIG. 3.

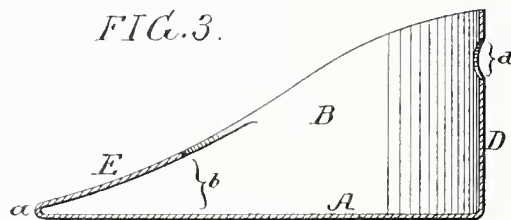
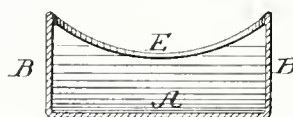


FIG. 4.



Witnesses:
Alex. Barkoff
Jno E. Paver

Inventor:
Amelia V. Andrews
by her Attorneys
Howson and Sons

UNITED STATES PATENT OFFICE.

AMELIA V. ANDREWS, OF PHILADELPHIA, PENNSYLVANIA.

BED-PAN.

SPECIFICATION forming part of Letters Patent No. 364,078, dated May 31, 1887.

Application filed August 9, 1886. Serial No. 210,427. (No model.)

To all whom it may concern:

Be it known that I, AMELIA V. ANDREWS, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented an Improved Bed-Pan, of which the following is a specification.

The object of my invention is to so construct a bed-pan as to provide for the ready emptying and cleansing of the same, and to permit the free manipulation of a syringe without disturbing the patient.

In the accompanying drawings, Figure 1 is a perspective view of a bed-pan constructed in accordance with my invention; Fig. 2, a plan view of the same; Fig. 3, a longitudinal section on the line 1 2, Fig. 2; and Fig. 4, a transverse section on the line 3 4, Fig. 2.

A is the base of the pan; B B, the opposite tapering side walls of the same, merging into the rounded rear wall, D; and E, the top of the pan, which extends rearward for some distance from the front or contracted end, *a*. So far as regards this covered front end, my improved bed-pan is substantially similar to those in common use, the incline being rather steeper than usual, so as to provide more space at the mouth *b* of this portion of the pan.

My invention relates, mainly, to the construction of the rear portion of the pan, which is in the form of a scoop, the sides and rear walls of the pan being straight, and being free from any internal rib or shoulder at the top. In other words, the rear portion of the opening is of the full size of the pan, so that on inverting the pan the contents of the same can be discharged without difficulty through the top opening, and provision is afforded for the ready and thorough washing out of the interior of the pan.

In the rear wall, D, of the pan, some distance below the top of the same, is an opening, *d*, for the insertion of a syringe when injections are to be given, or when it becomes necessary to apply a wash or lotion. This opening permits the free manipulation of the syringe, the discharge end of which can be dropped into the pan, if necessary, so that there will be no risk of soiling the bedclothing by the liquid used for injecting or washing purposes.

The opening *d* is above the level of the covered front portion of the pan, so that overflow through the opening is prevented, as the liquid contents of the pan never rise to the level of said opening; hence the latter can be allowed to remain unshielded, a much freer manipulation of the syringe being thereby permitted than when the pan has a pipe in place of the opening, or when the latter is partially obstructed by a shield to prevent overflow.

My improved bed-pan may be made of earthenware, porcelain, hard rubber, or other material, such as is now used for the purpose.

I claim as my invention—

A bed-pan having an inclined top with covered front, top opening without internal ribs or shoulders around the mouth, and rear wall with syringe-opening above the level of the covered front of the pan, said opening being without external tube or shield, all substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AMELIA V. ANDREWS.

Witnesses:

JOSEPH H. KLEIN,
HARRY SMITH.

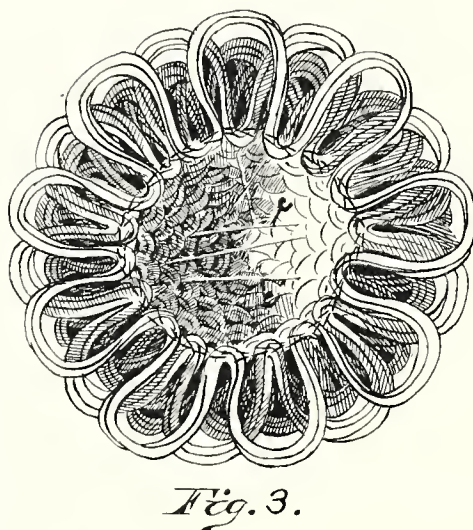
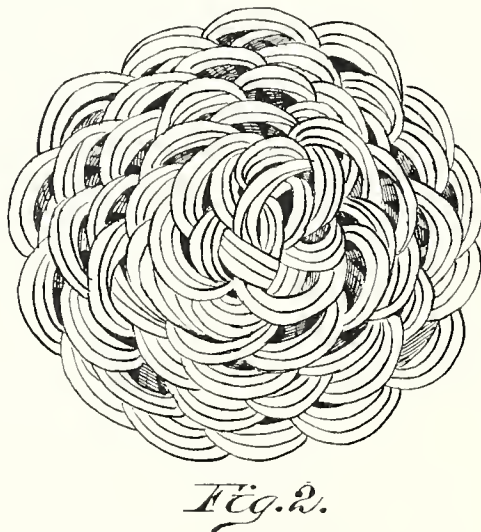
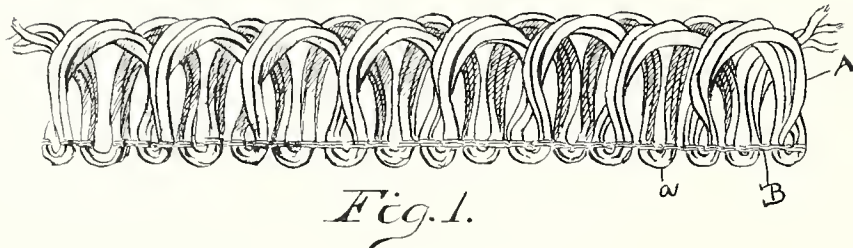
(No Model.)

E. WHITMORE.

METHOD OF CONSTRUCTING ROSETTES.

No. 363,929.

Patented May 31, 1887.



WITNESSES:

Reinhold Schickel
Walter J. Bilyeu.

INVENTOR
Emma Whitmore
by her atty.
G. H. Harding

UNITED STATES PATENT OFFICE.

EMMA WHITMORE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
AARON JONES' SONS, OF SAME PLACE.

METHOD OF CONSTRUCTING ROSETTES.

SPECIFICATION forming part of Letters Patent No. 363,929, dated May 31, 1887.

Application filed March 26, 1887. Serial No. 232,467. (No model.)

To all whom it may concern:

Be it known that I, EMMA WHITMORE, of the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in the Method of Construction of Rosettes for Ornamentation of Worsted and other Articles, of which the following is a true and exact description, due reference being had to the drawings which accompany and form a part of this specification.

In carrying out my method of construction I take wool or other suitable material and knit said material into strips having purls or loops projecting, essentially, from one side of the pillar only. In Figure 1 such a material is shown. A represents the purl or loop, and B the pillar. In the manufacture of such a fabric the loop will necessarily project a slight distance on the other side of the pillar, as is shown at *a*, Fig. 1; but it is such a slight distance as not to interfere with the carrying out of my method, and the fabric is still essentially one in which the loop projects from one side of the pillar only.

The fabric of the character heretofore described is wound around itself until it assumes the form shown in Figs. 2 and 3, Fig. 2 being a front view, and Fig. 3 a rear view. The material, when in this form, is held together by stitches *c*, Fig. 3, so that the whole forms a solid mass.

Having now fully described my invention, what I claim, and desire to protect by Letters Patent, is—

The method of construction of a rosette of wool or other similar fabric, which consists in knitting the wool or other suitable material into strips which have purls or loops projecting, essentially, from one side of the pillar only, and then winding said material upon itself and retaining the whole into a single mass by thread or other suitable means, substantially as and for the purpose described.

EMMA WHITMORE.

Witnesses:

MAURICE B. JONES,
GILBERT WEIR.

(No Model.)

E. HOOD.

APPARATUS FOR CUTTING GARMENTS.

No. 363,237.

Patented May 17, 1887.

Fig. 2.

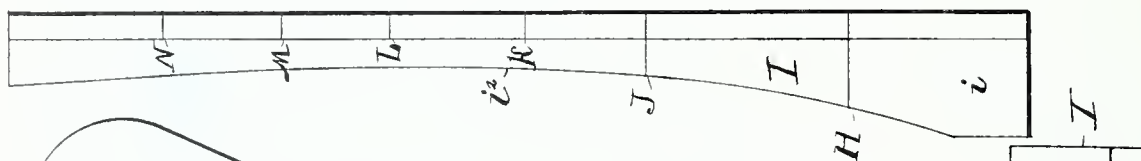
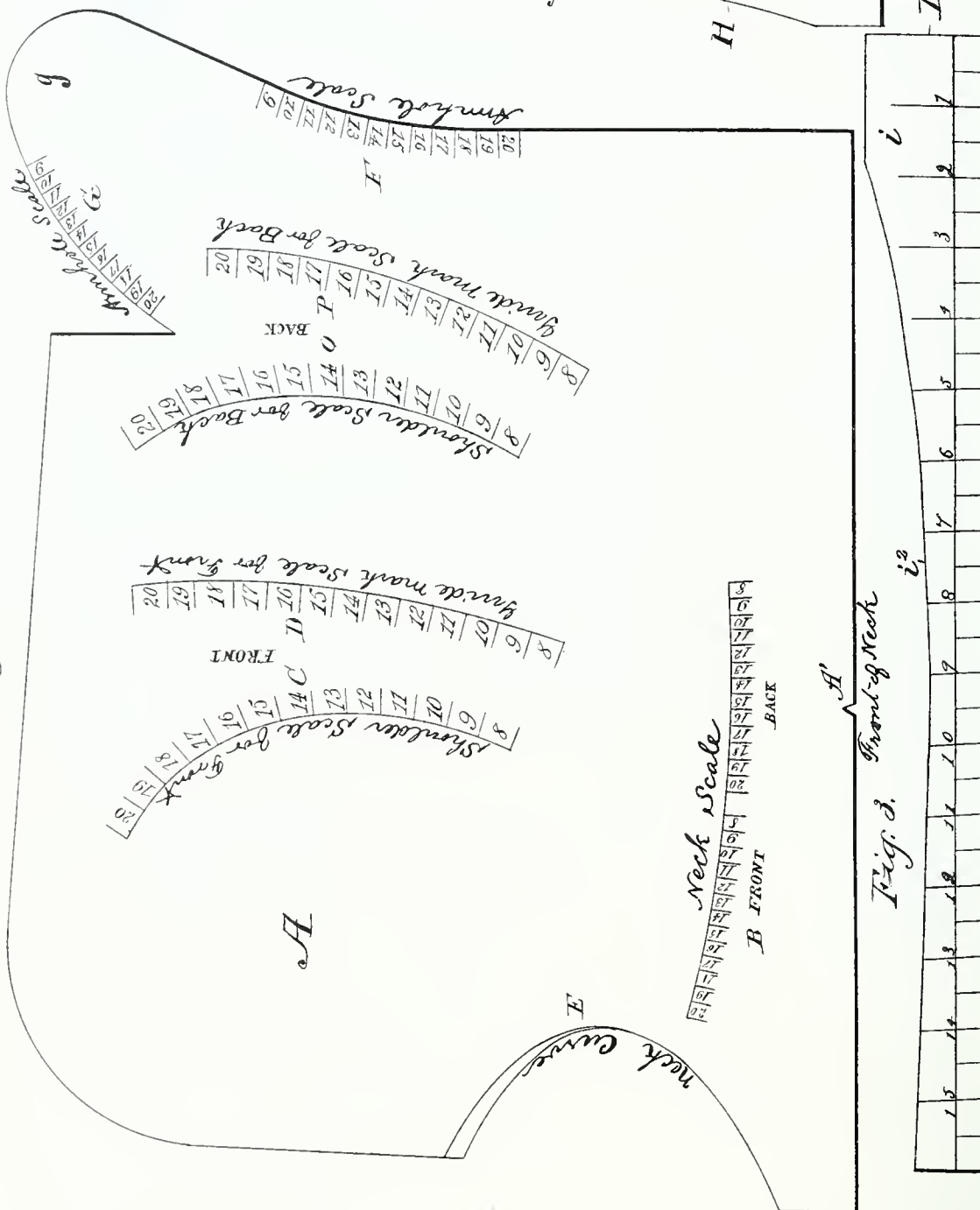


Fig. 1.



Witnesses:

J. A. Cupler,
J. D. Cupler

Inventor

Emiel Hood

UNITED STATES PATENT OFFICE.

EUNICE HOOD, OF BRADFORD, PENNSYLVANIA, ASSIGNOR OF ONE-HALF
TO JACOB C. CUPLER, OF SAME PLACE.

APPARATUS FOR CUTTING GARMENTS.

SPECIFICATION forming part of Letters Patent No. 363,237, dated May 17, 1887.

Application filed May 19, 1886. Serial No. 202,680. (No model.)

To all whom it may concern:

Be it known that I, EUNICE HOOD, of Bradford, county of McKean, and State of Pennsylvania, have invented a new and useful Apparatus for Cutting Garments, of which the following is a specification.

The object of my invention is to provide an improved apparatus for cutting garments; and it consists in a chart and rule of novel construction, all as hereinafter fully described, and pointed out in the claims.

Figure 1 is a plan view of the chart. Figs. 2 and 3 are plan views of the rule.

Referring to the drawings, A is the chart provided with the notched check-mark A', the neck-curve E, and the arm-piece g, and having the neck-scale B, the shoulder-scales C O, the guide-mark scales D P, and the armhole-scales F G thereon.

I is the rule, having the enlarged end i and the curved edge i', and provided with the marks H, J, K, L, M, and N on one side and graduated in inches and half-inches on the opposite side, as shown.

The manner of using the chart and rule is as follows: The goods being doubled and the hem marked off by the rule, the chart is laid upon the goods with the front edge even with the hem-mark. Now take a loose bust-measure and dot the figure or mark representing one-half the measure, and dot the notch on the front of the chart. Turn the chart with the hollow of the neck touching each front dot and mark around from dot to dot. Now place the chart with the arm-piece back of the two back dots, close against them, with the figure you are cutting from exactly against the upper dot. Mark around to the same figure on the other side of the arm-piece. Now lay off the chart and lay on the rule, with the head to the top dart over the armhole and the other end at the top dot of the neck, and mark off the shoulder. Lay the rule under the lowest place of the armhole and dot off four inches. Now lay it with the dart side up and the head against the hem-mark and the small end over the four-inch dot and strike a line. Now raise the small end of the rule one inch and dot the darts from the long marks on the rule. Take the measure down the length of the waist and

lay the rule under the lowest place of the armhole and dot the length of the waist. Lay the rule level with this dot, with the small end against the hem, and dot the darts from the four short marks. Place the rule from the top dart-marks to the bottom ones, with the head upward, and mark off the darts. Now take a tight measure around the waist, and dot from the rule at the figure or mark representing half the measure. Now lay the rule with the head at the highest part of the armhole and the small end at the dot representing the measure of the waist, the hollow side from you, and mark from dot to dot. Mark off your seams and cut.

For cutting the back I proceed as follows: Lay on the chart, with the front edge even with the fold of the cloth. Draw it up so the figure you are cutting from comes within one inch of the top edge of the cloth. Now dot the three figures you are cutting from on the back scale, the same as on the front. Now lay off the chart and lay on the rule, with the head at the upper dot from you and the small end at the dot next to you, and mark off the shoulder. Now turn the small end of the rule down, having the head where it is, and mark to the next dot. Place the rule with the figured side up and the head under the lower dot and mark the length of the waist. Now place the rule with the head even with the fold of the goods and the small end level with the length of the waist and dot five inches. Now place the rule with the head under the lower back dot and the small end against the five-inch dot and the hollow side from you and mark from dot to dot. Now lay off the forms with the hollow side of the rule and mark off your seams and cut.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An improved dress-chart provided with the check-mark A', the neck-curve E, and the arm-piece g, and having the neck-scale B, the shoulder-scales C O, the guide-mark scales D P, and the armhole-scales F G, substantially as herein shown and described.

2. An apparatus for cutting garments, consisting of the chart A, provided with the

check-mark A', the neck-curve E, and the arm-
piece *g*, and having the neck-scale B, the shoul-
der-scales C O, the guide-mark scales D P, and
the armhole-scales F G, and the rule I, hav-
5 ing the curved edge *i*², and provided with the
marks H J K L M N on one side, substan-
tially as herein shown and described.

In witness whereof I have hereunto signed
my name, in the presence of two subscribing
witnesses, this 5th day of April, 1886.

EUNICE HOOD.

Witnesses:

JOSEPH T. CHASE,
I. E. PENCILB.

(No Model.)

C. S. PUSEY.

ART OF MANUFACTURING HOSIERY AND OTHER GARMENTS.

No. 361,079.

Patented Apr. 12, 1887.

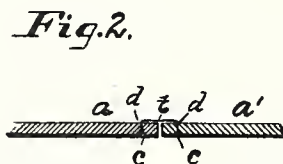
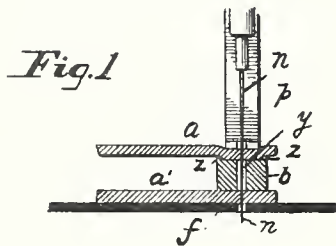


Fig. 3.

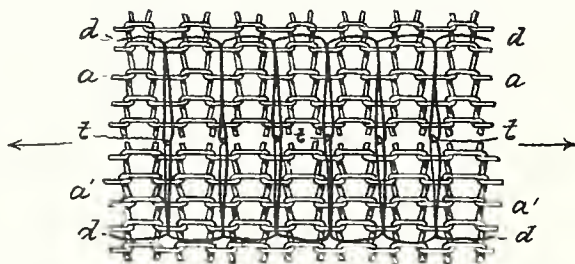


Fig. 4.

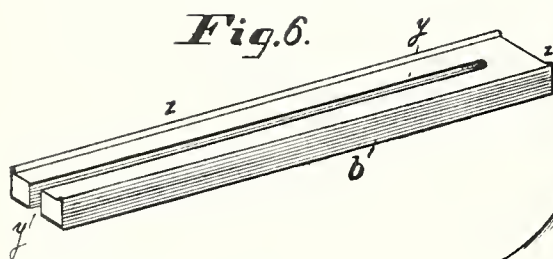
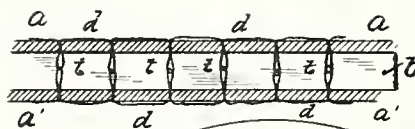


Fig. 5.

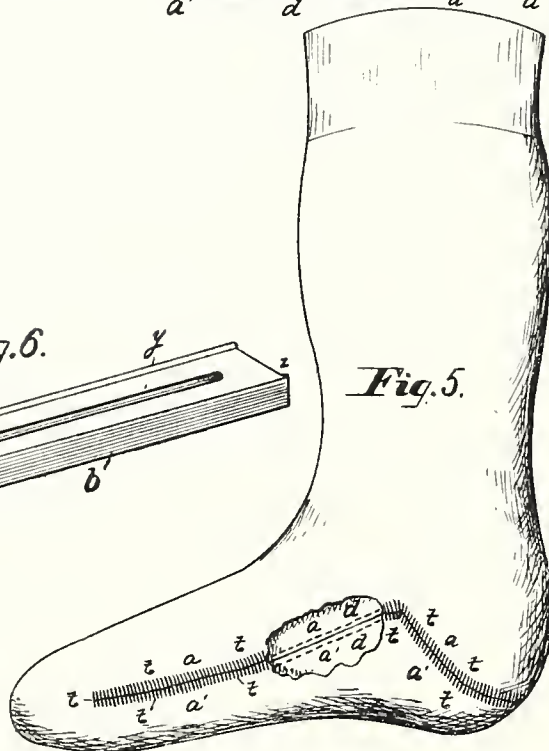
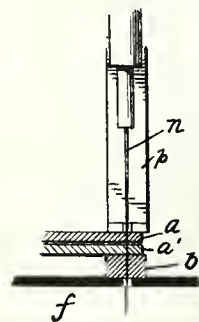


Fig. 7.



WITNESSES:

John Nolan,
Attest

INVENTOR

Caroline S. Pusey,
per Joshua Pusey, atty.

UNITED STATES PATENT OFFICE.

CAROLINE S. PUSEY, OF PHILADELPHIA, PENNSYLVANIA.

ART OF MANUFACTURING HOSIERY AND OTHER GARMENTS.

SPECIFICATION forming part of Letters Patent No. 361,079, dated April 12, 1887.

Application filed November 25, 1884. Serial No. 148,797. (No model.)

To all whom it may concern:

Be it known that I, CAROLINE S. PUSEY, a citizen of the United States, residing at the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in the Method of Uniting Fabrics by Sewing, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The nature of my invention is an improved method of uniting by sewing together the edges of stockings and other fabrics.

The invention is more especially applicable or useful in the manufacture of stockings, and particularly in that class of the same known as "cut goods." Its object is to obviate the well-known and serious objection to such goods arising from the hard, raised, and insufficiently elastic seams, which hurt the feet of the wearer. I accomplish this object through means of a method of uniting, by sewing, the free margins of the fabric together in such a manner that in lieu of the aforesaid objectionable and hitherto unavoidable seams a smooth or flush elastic seam is produced.

The articles of manufacture resulting from the application of my improved method or process form the subject of an application for Letters Patent, the serial number of which application is 173,849. I have also filed an application for a patent (Serial No. 180,717) in which I mention another method of practicing my invention, in which latter application I claim the invention broadly, which herein is claimed only in a particular or specific form.

I shall now proceed to describe what I consider the best modes of carrying out my invention, reference being had to the annexed drawings, of which—

Figure 1 is a transverse vertical section through the two margins of a knit fabric being sewed together. Fig. 2 is a section across the seam of the fabric after the ends of the free edges thereof have been brought flush and opposite each other. Fig. 3 is a plan, greatly magnified, of a portion of the united fabric at and near the margins thereof. Fig. 4 is a section taken on the vertical line upon which the superposed margins are sewed together. Fig. 5 is a side elevation of a finished stocking whose cut edges have been united according to my invention, part of the same being cut

away, in order to show the inner side of one of the seams. Fig. 6 is a perspective view of a device which I have used for keeping separate the two sides or edges of the fabric while being sewed together. Fig. 7 is a sectional view similar to Fig. 1, illustrating a modification in one of the steps of the invention.

Like letters of reference where they occur in the several figures indicate the same or corresponding parts.

I interpose between the two overlapped edges aa' of the fabric to be united, either before commencing the sewing or continuously as the same proceeds, some suitable material or device, b , and such as will permit the needle n of the machine to pass through the same in sewing, and which may be subsequently withdrawn, thereby leaving a space between the two superposed layers of the fabric, which space is spanned by the sewing-threads t , Fig. 4.

Fig. 6 represents one form of device (not of my invention, however) that I have used for the purpose mentioned. It is also seen in cross-section in Fig. 1, (b), and consists of a long plate of wood, metal, or other suitable substance, having a longitudinal slot, y , therein, which is open at the rear end, and is provided with lateral flanges z , the width between which is about equal to the width of the presser-foot p of the sewing-machine plus the thickness of the fabric. These flanges serve to insure the needle passing through slot y by preventing the plate from moving laterally.

The teeth of the feed-motion, (not shown,) working through the bed-plate f , carry forward, in the usual manner, the under layer, a' , of the fabric, and with it, by friction, the separator-plate b and the upper layer, a , the latter sliding against the smooth bottom of the presser-foot—that is to say, the three parts or layers are advanced simultaneously. When the length of the slot, or a part thereof, has been traversed, the separator is drawn back any desired distance, the line of threads t , Fig. 4, passing out through the slot, and the sewing is again proceeded with, and so on, if required. When the sewing is completed, or as the same proceeds, the free edges of the fabric are cut off at a distance outside the line of stitching equal to about one-half the thickness of the separator—that is to say, one-half the distance

between the separated layers of the stuff. If these outside free margins are not too wide for the final object in view, hereinafter explained, the trimming will, of course, be unnecessary.

The sewing having been entirely completed in the manner described, the stuff thus sewed together is removed from the machine, and the two sides are then drawn out, so that the edges of the free margins are brought about flush and in the same plane as in Figs. 2 and 3, also in Fig. 5, the threads *t* spanning over the space between the two lines of stitching, *d d*.

The sewing is preferably done with quite a close short stitch under tension, so as to catch and bind as nearly as practicable the loops successively of the stuff, as shown in Fig. 3. When the two sides of the fabric are stretched apart, as in the direction of the span of the threads *t*, the stitches or loops of the latter bite, as it were, into the loops or threads of the fabric, in the manner illustrated in Fig. 2 at *c c*, and thus the latter are held the more firmly and securely.

It will be obvious from the foregoing that by the method described there is no raised seam, and that the seam is laterally highly elastic—in fact, usually, the fabric may be stretched on the line of stitching—that is, in the direction of the oppositely-pointing arrows, Fig. 3—as far as any other portion of the stuff will stretch in a like direction and without breaking the stitch-threads.

The series of threads *t*, which span the free margins of the stuff, as mentioned, may be either on the usual outside of the finished article or on the inside thereof.

In sewing the layers together I have used a lock-stitch machine, such as the "White" machine; but a chain-stitch or other suitable machine may be employed.

In the modification shown in Fig. 7 the two edges *a a'* of the fabric to be united are superposed in contact, instead of being separated, as in Fig. 1, and a strip, *b'*, of suitable material of the required thickness and readily penetrable by the needle—such as paper—is placed or run in upon the bed-plate of the machine beneath the two layers aforesaid. After the sewing is finished the paper is removed, which leaves that portion of the stitch-threads which had been enveloped by the paper standing out free. The sides or layers of the fabric are then turned over and pulled apart until the outstanding part of the threads is taken up and the edges of the stuff are brought opposite each other in the same manner as previously described. The strip of paper, &c., may also be placed upon, instead of beneath, or between, the superposed layers.

It is scarcely necessary to observe that a slotted-plate device alone cannot be successfully used, except when interposed between the two layers of fabric. If, however, it be placed beneath or above the layers, and a strip of paper or like material stiff enough to hold

the stitches be laid upon the plate in the first instance and beneath it in the latter, it may be used in that connection.

Although, as stated in the beginning of this specification, my invention is applicable in the manufacture of hosiery or knit goods wherein it is necessary to have an elastic seam as possible, I have also employed the described method in connection with textile and felted fabrics; also, leather, wherein a particularly elastic seam is not required, but a flush seam is desirable in uniting the parts together, especially in the case of quite thick fabrics.

I am fully aware of the fact that ordinary ornamental hem-stitching of textile fabrics has been long practiced upon sewing-machines by interposing a temporary stratum of paper, &c., between the two layers of material, wide margins being left which are afterward turned over and sewed to the main body of the fabric, leaving an open space between the opposite edges, across which the threads extend at comparatively wide intervals apart. I do not, therefore, claim any novelty *per se* in this mode of producing a hem-stitch; but

What I do claim as new, and desire to secure by Letters Patent, is as follows:

1. The method of uniting fabrics, consisting in superposing their free edges with a temporary stratum or body of suitable material adapted to allow the passage of the needle through the same, the thickness of said stratum being equal to one-half the distance between the free edge of the fabric and the line of stitching to be done, then sewing through the layers of fabric and said stratum, then removing the latter, and finally drawing apart the sides of the fabric so that the said free edges will come opposite to each other in the same plane without overlapping.

2. The improved method of uniting fabrics, consisting in superposing their free margins together by first interposing a removable stratum of suitable material between the superposed layers to be united, then stitching said layers together through the separating stratum and trimming off the margins of the fabric thus sewed together at a distance from the line of stitching equal to one-half the thickness of said stratum, removing the latter, and then drawing apart the sides of the fabric so as to bring the trimmed edges thereof opposite to each other in the same plane without overlapping.

3. The method of uniting knit or looped fabrics, consisting in sewing their free margins together by interposing a removable stratum of suitable material between the superposed layers to be united, then stitching said layers together through the separating stratum with a close stitch under tension, so that the successive loops of the fabric shall be severally caught and firmly compressed by the stitches, removing said stratum and trimming off the margins of the fabric thus sewed together at a distance from the line of stitching equal to

one-half the thickness of said stratum, and
finally drawing apart the sides of the said fabric
thus stitched together, so that they will come
opposite and substantially in the same plane
5 without overlapping, whereby the line of
stitch-threads shall not interfere with the lat-
eral stretch of the fabric, and the margins
thereof between the lines of stitching are
crossed and covered by the threads which
10 have been extended across the open space be-

tween said lines of stitching, substantially as
and for the purpose set forth.

In testimony whereof I have hereunto af-
fixed my signature this 22d day of November,
A. D. 1884.

CAROLINE S. PUSEY.

Witnesses:

FRANCIS S. BROWN,
JOHN NOLAN.

(No Model.)

C. S. SNEDDEN.

TIDY FASTENER.

No. 384,293.

Patented June 12, 1888.

Fig. 1.

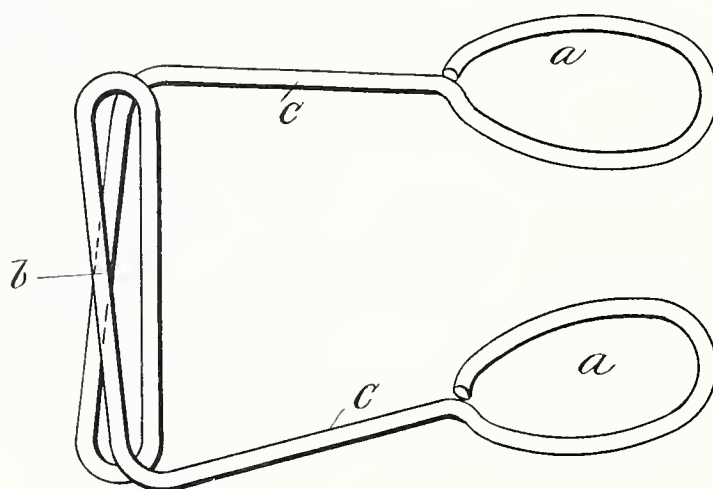
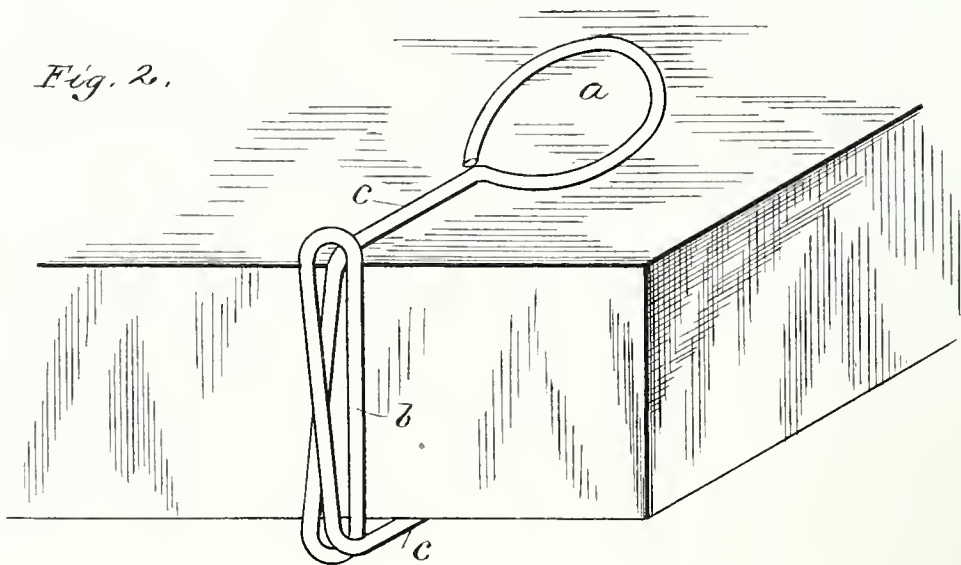


Fig. 2.



WITNESSES:

H. B. Harrison,
J. A. Herron,

Inventor,
Car a S. Snedden,
Per *O. D. Lewis.*

Atty.

UNITED STATES PATENT OFFICE.

CORA S. SNEDDEN, OF BRADDOCK, PENNSYLVANIA.

TIDY-FASTENER.

SPECIFICATION forming part of Letters Patent No. 384,293, dated June 12, 1888.

Application filed January 14, 1888. Serial No. 260,796. (No model.)

To all whom it may concern:

Be it known that I, CORA S. SNEDDEN, a citizen of the United States, residing at Braddock, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Tidy-Holders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved device for attaching tidies, &c., to articles of furniture; and it consists in a piece of steel or spring wire, each end of which is formed into a loop and the central portion bent to form a rectangular spring, together with certain details of construction, as will be fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a perspective view of my improved fastener constructed in accordance with my invention. Fig. 2 is a perspective view showing the manner of applying my invention to the corner of an ordinary mantel-piece.

To put my invention into practice, I provide a piece of steel or other spring wire, *c*, and cut the same to a proper length. At each end of this wire I form a large circular loop, *a*, which serves to give the device a substantial

bearing against the fabric. I now form by suitable means, at an equal distance from the loops *a*, a rectangular spring, *b*, which, when properly constructed, will bring the loops *a* near together and the one directly above the other.

By means of a device such as described tidies, &c., may be secured to the backs of chairs and other articles of furniture and the fastener concealed beneath the article.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The fastener herein described, consisting of a piece of wire, *c*, having a loop, *a*, formed at each end, the rectangular spring *b*, formed from the central portion of the wire *c*, and the loops *a*, brought the one directly above the other, substantially as set forth.

2. The herein-described fastener having a circular loop, *a*, on each end of the same and bent in such a manner as to bring the one above the other, and a spring, *b*, formed from the central portion of the wire *c*, as and for the purpose set forth.

In testimony that I claim the foregoing I heren to affix my signature this 10th day of May, A. D. 1888.

CORA S. SNEDDEN. [L. S.]

In presence of—

T. F. EWING,
FRANK W. SMITH.

(No Model.)

S. HOHENSTEIN.
GARMENT SUPPORTER.

No. 391,713.

Patented Oct. 23, 1888.

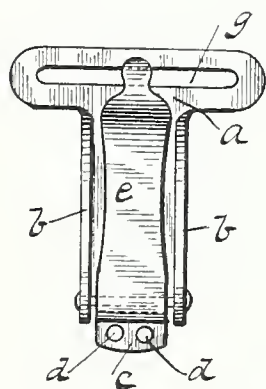


Fig. 1.

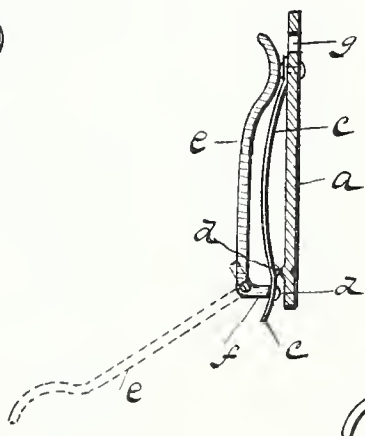


Fig. 2.

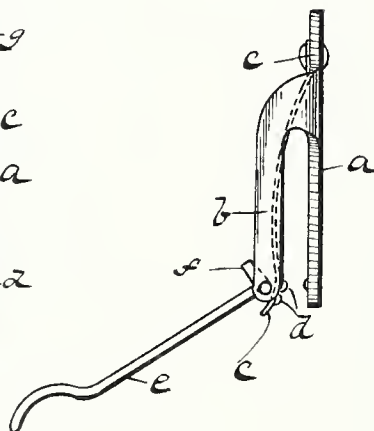


Fig. 3.

Witnesses:

M. E. Harrison,
J. A. Herrow.

Inventor:
Sally Hohenstein,
Per. O. D. Lewis.

att'y.

UNITED STATES PATENT OFFICE.

SALLY HOHENSTEIN, OF PITTSBURG, PENNSYLVANIA.

GARMENT-SUPPORTER.

SPECIFICATION forming part of Letters Patent No. 391,713, dated October 23, 1888.

Application filed June 11, 1888. Serial No. 276,767. (No model.)

To all whom it may concern:

Be it known that I, SALLY HOHENSTEIN, a citizen of Germany, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Garment-Supporters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in garment-supporters; and it consists in a device capable of being attached to a suspender, and a means for gripping or taking hold of fabric of any thickness, as will be fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a front elevation of my improved garment-supporter constructed in accordance with my invention. Fig. 2 is a side sectional elevation of the same. Fig. 3 is a side elevation of my improvement, showing the same open to receive the garment.

To put my invention into practice, I provide a small piece of sheet metal and form therefrom a frame, *a*, of suitable size, having two parallel bearing-arms, *b*, formed integral therewith, occupying a position along each side of the frame. Secured to the upper portion of the frame *a*, between the bearing-arms *b*, is a flat spring, *c*, provided with several indentations, *d*, on its lower end, which, together with two or more formed on the frame *a* directly opposite, serve to better clamp the garment or fabric placed between the spring *c* and frame *a*. Pivoted to the lower extremities of the

bearing-arms *b* is a lever, *e*, having a portion, *f*, bent at a right angle, which bears against the spring *c* and presses the same against the frame *a*.

In operation the device is attached to a suspender by means of a slot, *g*, formed in the top of the frame *a*. The lever *e* is turned downward, which allows the spring *c* to move away from the frame *a*. The garment or fabric is placed between the spring *c* and frame *a* and the lever *e* turned back to its former position, which operation, by means of the bent portion *f* of the lever *e*, rigidly clamps the fabric between the spring *c* and the frame *a*.

In order to release the fabric, the lever *e* is made to occupy a position such as shown at Fig. 3 on the drawings.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In a garment-supporter such as described, the combination, consisting of the frame *a*, having a slot, *g*, formed therein for the purpose of attaching the same to a suspender, the bearing-arms *b*, formed integral with the frame *a*, the spring *c*, secured between the arms *b*, the lever *e*, pivoted to the parallel arms *b*, having a bent portion, *f*, adapted to operate against the spring *c*, and the small indentations *d*, for further securing the fabric between the spring *c* and frame *a*, substantially as and for the purpose described.

In testimony that I claim the foregoing I hereunto affix my signature this 20th day of April, A. D. 1888.

SALLY HOHENSTEIN. [L. s.]

In presence of—

S. A. WILL,

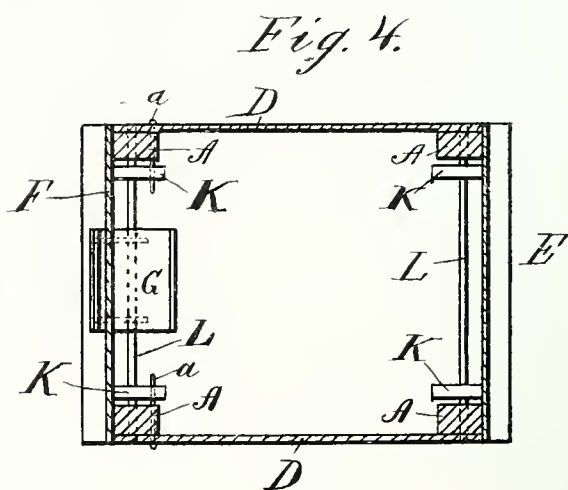
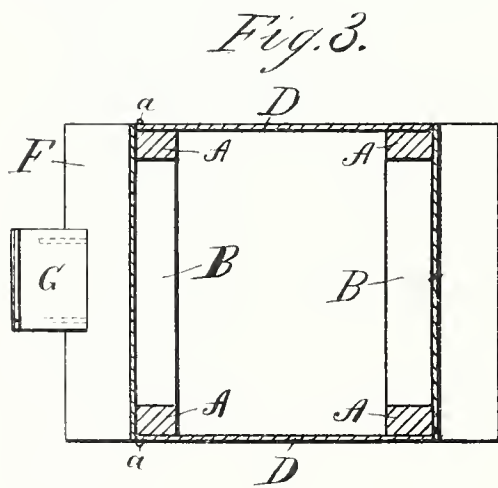
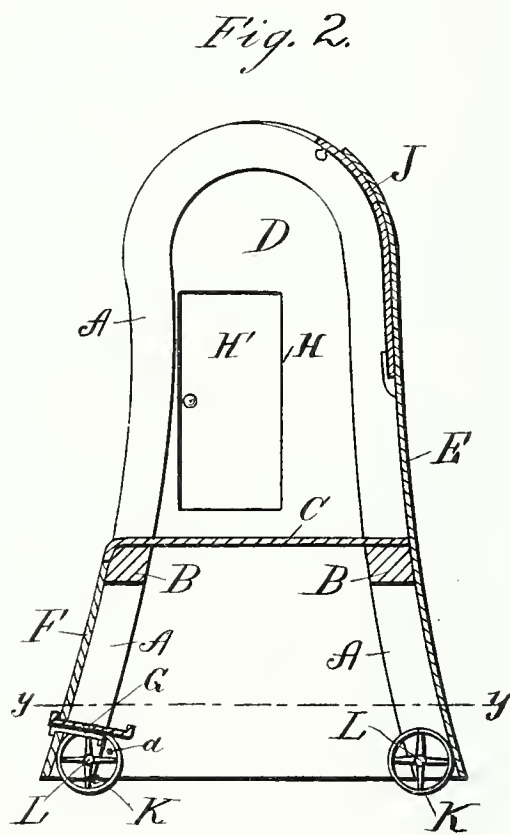
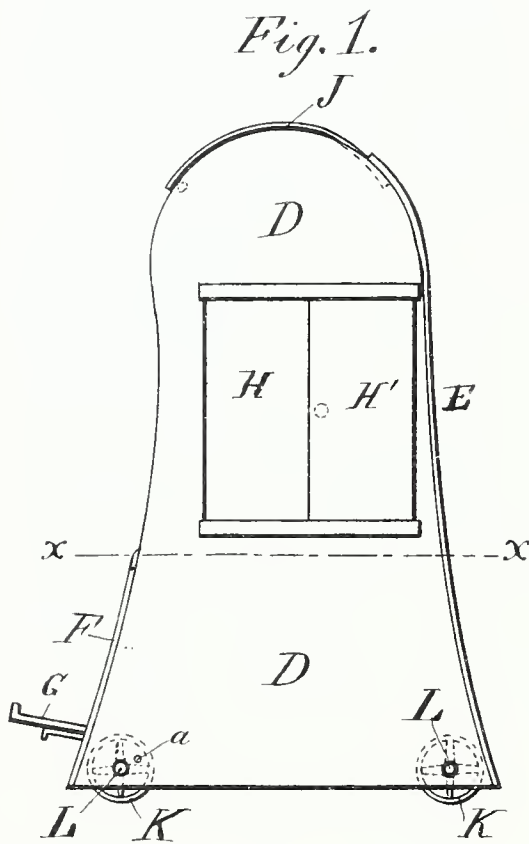
M. E. HARRISON.

(No Model.)

A. BUNN.
CHAIR.

No. 377,512.

Patented Feb. 7, 1888.



WITNESSES:
Wm. Twitchell.
C. Sedgwick.

INVENTOR:
A. Bunn.
BY *Munn & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ANNIE BUNN, OF BIRDSBOROUGH, PENNSYLVANIA.

CHAIR.

SPECIFICATION forming part of Letters Patent No. 377,512, dated February 7, 1888.

Application filed July 2, 1887. Serial No. 243,268. (No model.)

To all whom it may concern:

Be it known that I, ANNIE BUNN, of Birdsborough, in the county of Berks and State of Pennsylvania, have invented new and useful
5 Improvements in Chairs, of which the following is a full, clear, and exact description.

The object of my invention is to provide a chair, designed particularly for out-of-doors use, wherein the occupant may be protected
10 from sun, wind, or public gaze, or may throw the chair open at the top and sides at will.

The invention consists of the construction of the chair, as hereinafter described and claimed.

15 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of my new and improved chair. Fig. 2 is a vertical sectional elevation of the same. Fig. 3 is a sectional plan view taken on the line *x x* of Fig. 1, and Fig. 4 is a similar view taken on the line *y y* of Fig. 2.

25 A A represent the side pieces, which constitute the legs of the chair and the top and overhead portion of the frame. The said side pieces are secured together by the cross-pieces B B, which serve as supports to the
30 seat C of the chair. The two sides and back of the chair are inclosed by the walls D and E. The front is inclosed from the seat C to the bottom of the chair by the wall F, in which is fitted a foot-rest, G, which is adapted
35 to be drawn out to the position shown in Figs. 1 and 3, and slid beneath the seat, or out of the way, as shown in Figs. 2 and 4.

The side walls, D, are provided with openings H, which serve as windows or window-
40 openings, and these openings may be elosed, preferably, by a sliding door or panel, H'.

The back wall, E, is provided with a sliding top, J, which is curved to correspond with the curved top of the chair, and adapted to be moved to the position shown in Fig. 1, to
45 shade or protect the occupant, or shoved back to the position shown in Fig. 2, when shade or protection from the weather are not required.

The chair is mounted on wheels K for convenience in moving it from place to place; and to prevent the chair from moving of its own accord when placed upon an inclined surface I form an aperture through the frame of the chair, near the wheels K, and insert a pin, *a*,
55 into said opening, to engage with the spokes of the wheels, thus serving as a brake to keep the chair stationary.

The wheels K are mounted upon the shafts L L, held at the lower ends of the main side
60 pieces, A, as shown clearly in the drawings.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A chair composed of the main side pieces or frames, A, cross-pieces B B, seat C, back
65 and side inclosing-walls, D E, and the sliding top or cover J, substantially as described.

2. The chair composed of the main side pieces or frames, A, cross-pieces B, seat C, and back and side walls, D, the latter pro-
70 vided with the openings H and doors or panels H', substantially as described.

3. The side pieces or frames, A A, connected together by the cross pieces B B, and inclosed and provided with the seat C, in
75 combination with the shafts L, wheels K, and pins *a*, for locking the wheels, substantially as described.

ANNIE BUNN.

Witnesses:

STANISLAUS REMAK,
ANNA M. DE HAVEN.

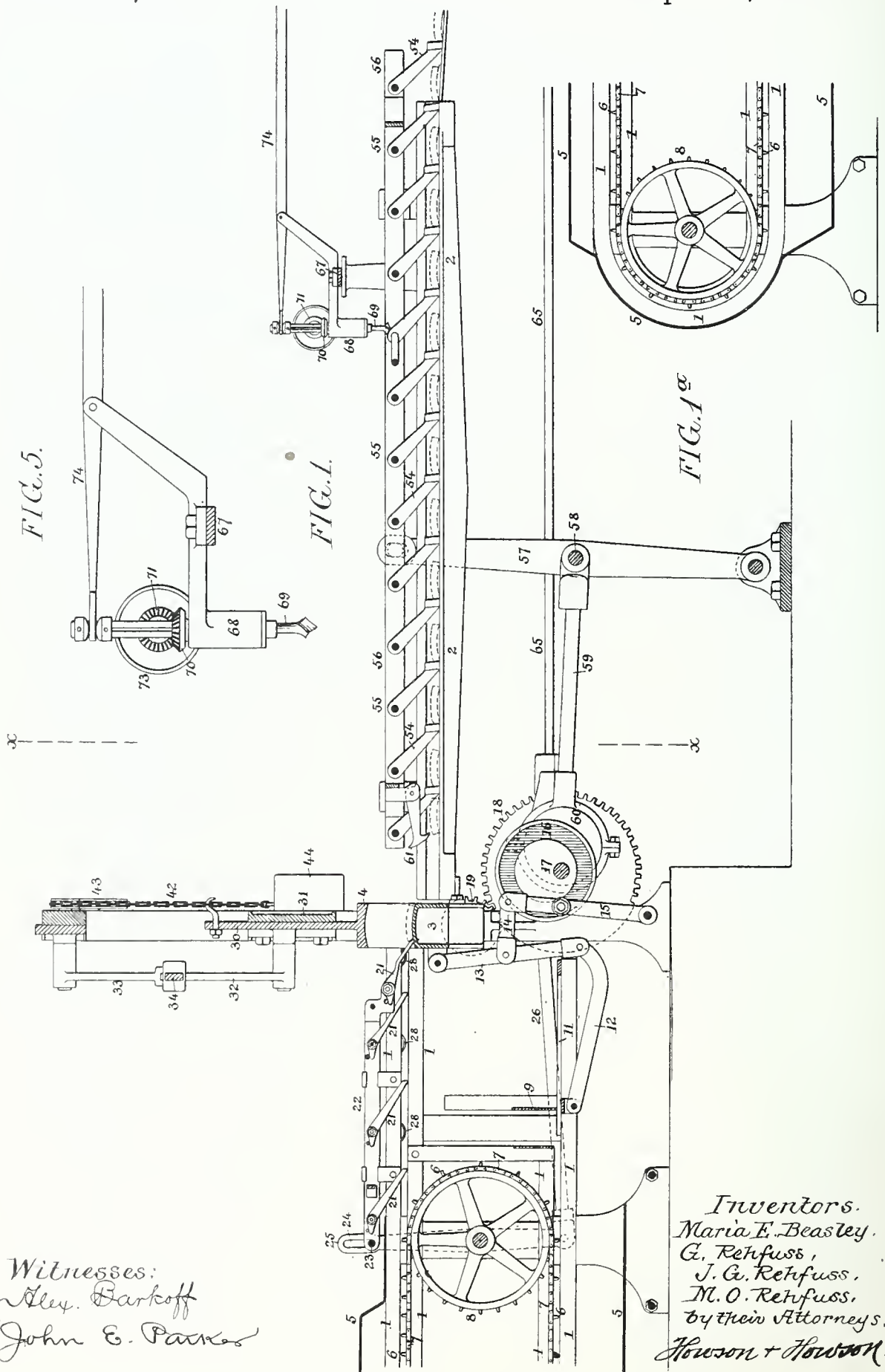
(No Model.)

3 Sheets—Sheet 1.

M. E. BEASLEY & G., J. G. & M. O. REHFUSS.
BARREL MAKING MACHINE.

No. 380,976.

Patented Apr. 10, 1888.



Witnesses:
Alex. Barkoff
John E. Parker

Inventors.
Maria E. Beasley.
G. Rehfuess,
J. G. Rehfuess,
M. O. Rehfuess,
by their Attorneys,
Howson + Howson.

(No Model.)

3 Sheets—Sheet 2.

M. E. BEASLEY & G., J. G. & M. O. REHFUSS.
BARREL MAKING MACHINE.

No. 380,976.

Patented Apr. 10, 1888.

FIG. 4.

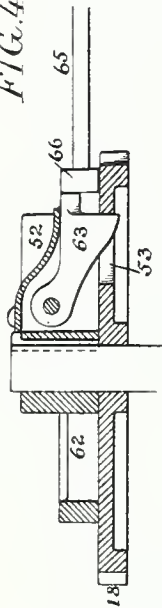


FIG. 2.

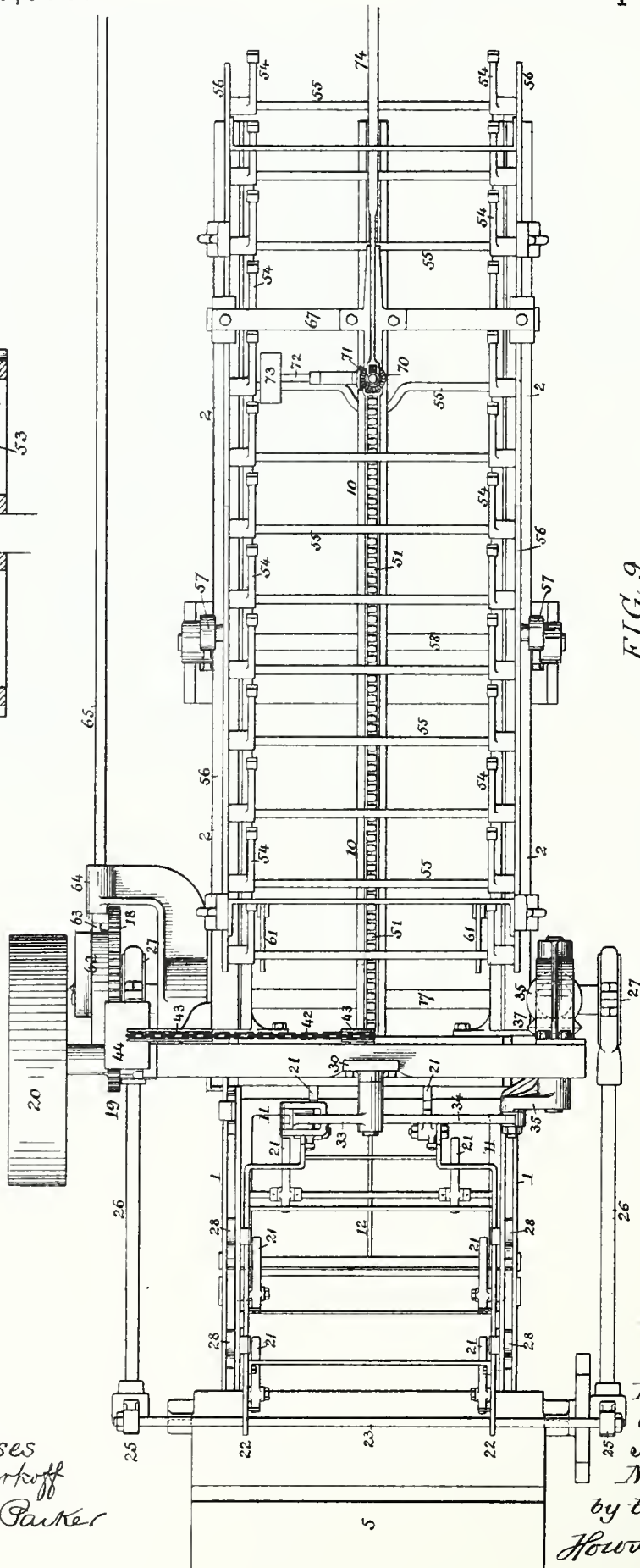
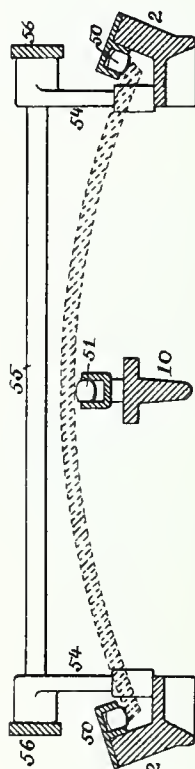


FIG. 9.



Witnesses
Alex. Barkoff
John E. Parker

Inventors:
Maria E. Beasley,
G. Rehfuß,
J. G. Rehfuß &
M. O. Rehfuß
by their Attorneys
Howson & Howson.

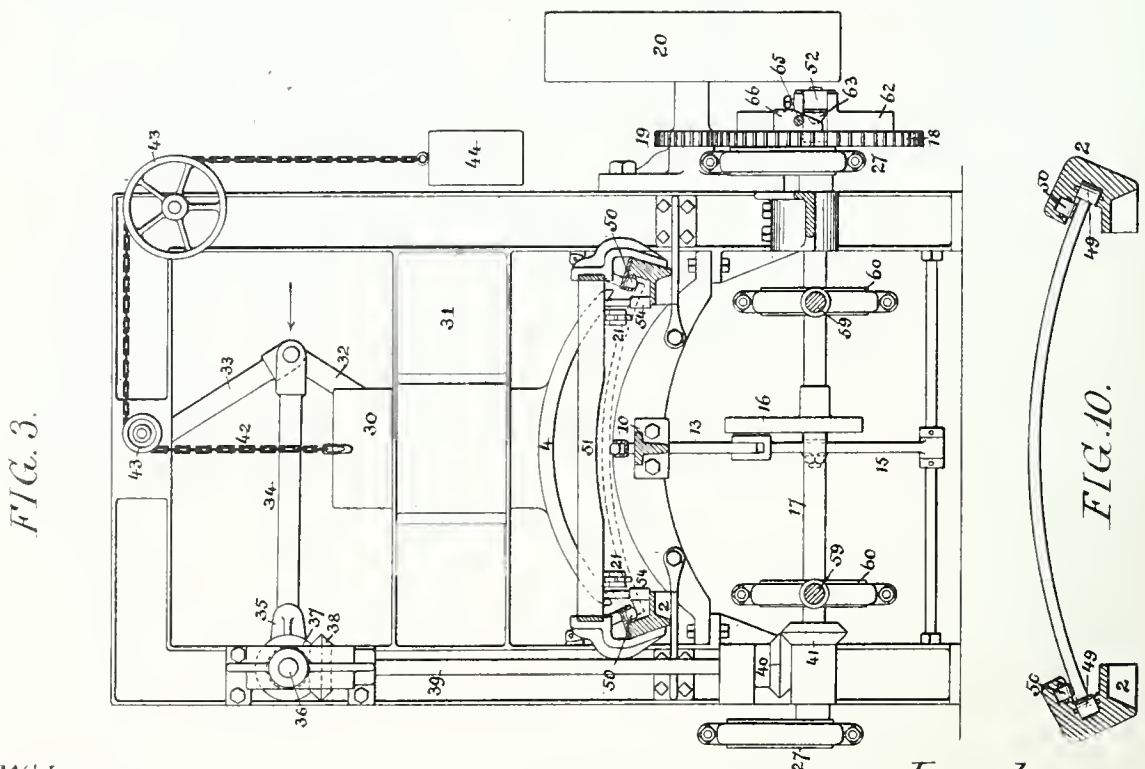
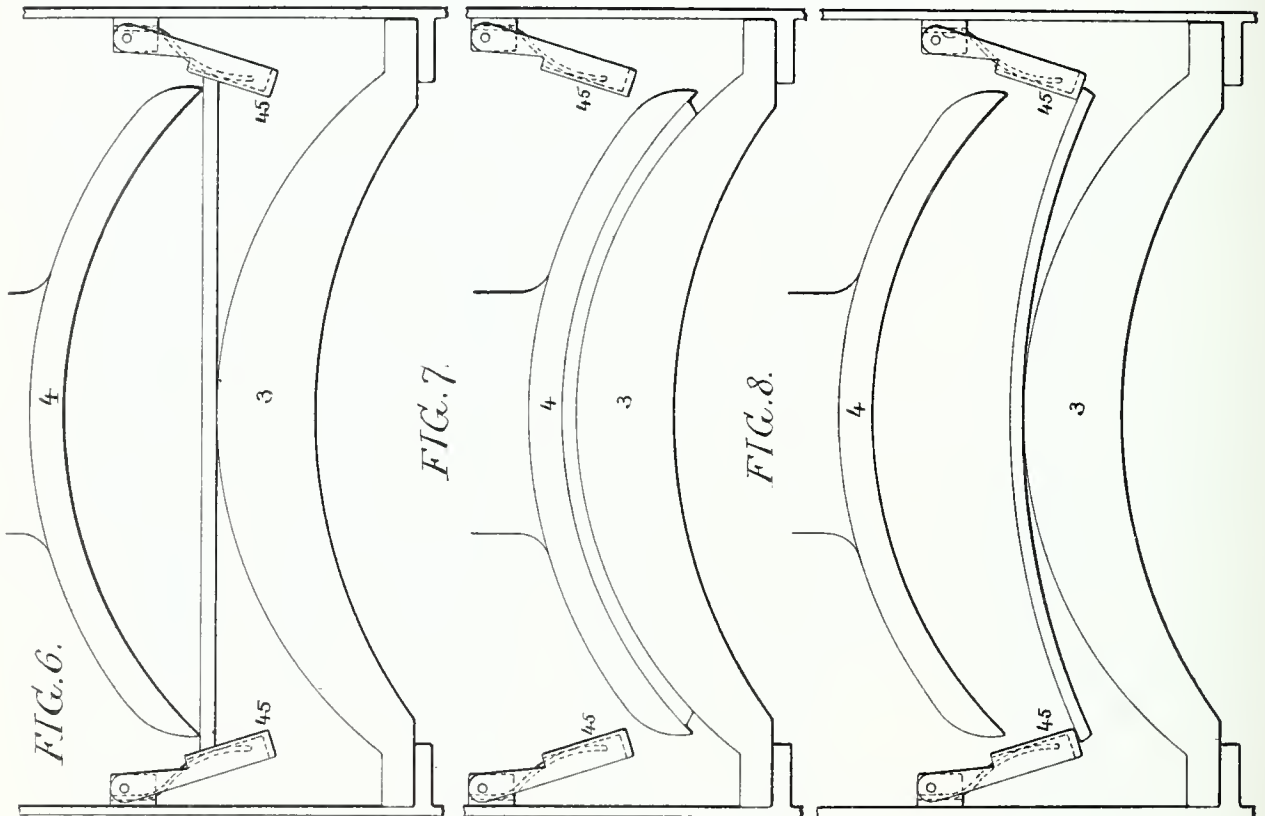
(No Model.)

3 Sheets—Sheet 3.

M. E. BEASLEY & G., J. G. & M. O. REHFUSS.
BARREL MAKING MACHINE.

No. 380,976.

Patented Apr. 10, 1888.



Witnesses:
Alex. Barkoff.
John E. Parker.

Inventors:
Maria E. Beasley, G. Rehfuß, J. G. Rehfuß &
M. O. Rehfuß
by their Attorneys *Houston & Houston*.

UNITED STATES PATENT OFFICE.

MARIA E. BEASLEY, GEORGE REHFUSS, J. GEORGE REHFUSS, AND MARTIN O. REHFUSS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO THE AMERICAN BARREL AND STAVE COMPANY, OF CAMDEN, NEW JERSEY.

BARREL-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 380,976, dated April 10, 1888.

Application filed October 27, 1887. Serial No. 253,522. (No model.)

To all whom it may concern:

Be it known that we, MARIA E. BEASLEY, GEORGE REHFUSS, J. GEORGE REHFUSS, and MARTIN O. REHFUSS, all citizens of the United States, and residents of Philadelphia, Pennsylvania, have invented certain Improvements in Machines for Making Barrels, of which the following is a specification.

Our invention relates to certain improvements in the manufacture of barrels by machinery, the object of our improvements being to facilitate the operations which intervene between the shaping of the staves and the setting up of the staves into barrel form, and with this object in view we have devised certain combinations of mechanism for effecting the heating or steaming of the staves, the bending of the same, the maintenance of the staves in a bent condition while they are being fed from the bender to the setting-up machine, and the formation of the bung-hole in one of the staves while it is in transit.

In the accompanying drawings, Figure 1 is a longitudinal section of part of the machinery embodying our invention; Fig. 1^a, a similar view of another part of the same. Fig. 2 is a plan view of that portion of the machine shown in Fig. 1. Fig. 3 is a transverse section on the line *x x*, Fig. 1. Figs. 4 and 5 are detached views of parts of the machine on an enlarged scale; Figs. 6, 7, and 8, diagrams illustrating the operation of the stave-bender; Fig. 9, an enlarged transverse section of the stave-feedway, and Fig. 10 a view illustrating a modification of the same.

The machine has two stave-feedways, one for the straight staves and one for the staves after they are bent, the first feedway consisting of opposite slotted or grooved guides 1 and the second staveway having end guide or bearing bars, 2, and a central bar, 10.

The first stave-feedway is in the present instance on a somewhat higher plane than the second, and between these feedways is interposed a bending-bed, 3, so that the staves may be fed from the first way onto said bending-bed, then bent by the action of a die, 4, and then fed onto the second way.

The guides 1, forming the first stave-feedway,

are extended into and through the casing 5 of a suitable steam-box, through which the staves are traversed by means of studs 6 on an endless chain, 7, which passes around a sprocket-wheel, 8, at each end of the steam-box.

The staves are fed into a hopper or receptacle, 9, and the bottom stave of the pile is at the proper time pushed from the receptacle into the lower front end of the guides 1 beneath the chain 7, the discharge of the stave from the receptacle being effected by a sliding pusher, 11, connected by a rod, 12, to a pivoted arm, 13, connected by a rod, 14, to a pivoted arm, 15, a stud on which engages with a cam, 16, carried by a counter-shaft, 17, the latter having at one side of the machine a spur-wheel, 18, which gears into a spur-pinion, 19, on the driving-shaft of the machine, said shaft being provided with a suitable belt-pulley, 20.

At the rear end of the steam-box the lower guides, 1, are curved, so as to be concentric with the endless chain, whereby the staves are carried up by the chain as it passes around the sprocket-wheel and pass into and through the upper portion of the steam-box.

As the staves issue from the steam-box they are acted upon by pivoted fingers 21, carried by opposite sliding bars 22, suitably guided on the frame of the machine, these bars being connected to a transverse rod, 23, the ends of which are adapted to slots 24 in the upper ends of levers 25, hung to the shaft of the forward sprocket-wheel, 8, and connected by means of rods 26 to eccentrics 27 on the shaft 17, the fingers pushing the staves before them on the forward movement of the slide-bars, but yielding so as to pass over the staves on the backward movement of said bars, the rearward movement of the staves being prevented by means of spring-clips 28, which consist of elastic plates carried by the upper portions of the guides 1 and bent so that their convex faces project down from above into the guide-slots, as shown in Fig. 1, and act upon the end portions of the staves to retain the same.

The staves delivered from the guides 1 onto the bending-bed 3 are there subjected to the action of the bending-die 4, which is carried by a slide, 30, suitably guided in a transverse

bar, 31, of the frame and connected to one arm, 32, of a toggle, the other arm, 33, of which is hung to a fixed pin on the frame. The arms of the toggle are connected by a rod, 34, to a crank, 35, on a short shaft, 36, adapted to suitable bearings on the side frame of the machine and driven by means of bevel-wheels 37 and 38 from a vertical shaft, 39, which in turn is driven by bevel-gears 40 and 41 from the shaft 17. As the toggle-arms are drawn in the direction of the arrow, Fig. 3, therefore, a powerful downward pressure is imparted to the slide 30 and its bending-die 4, the slide and die being lifted on the reverse movement. To the upper end of the slide is connected a chain, 42, which passes over pulleys 43 on the frame and is provided with a counterbalance-weight, 44.

When the stave is placed on the bending-bed, its opposite ends are acted upon, and the stave is properly centered by spring-jaws 45, hung to the opposite side frames of the machine; but as the die 4 descends these jaws are separated and release the stave for the bending action of the die. As the die rises after bending the stave, the jaws 45 bear upon the top of the stave near each end, and by limiting the recoil of the stave determine the amount of bend retained by the latter.

After the stave has been bent, it will, on the next forward movement of the slide-bars 22, be acted upon by the forward fingers, 21, of the same and delivered from the bending-bed 3 into the guides 2 of the second feedway. These guides have overhanging plates carrying anti-friction rollers 50, and the central bar, 10, of the feedway is also provided with anti-friction rollers 51, and is in a somewhat higher plane than the guides 2, to correspond with the curvature of the stave. It will thus be seen that as the stave is fed along it has a central bearing on the under side upon the rollers 51 of the central bar, 10, while the upper side of the stave, at and near each end, has its bearings upon the rollers 50 of the end guides, 2, the stave being thus in its traverse along the feedway retained in its proper bent position without causing undue friction upon the bearings or necessitating the exercise of more than a moderate amount of power to feed the staves. This feeding of the staves is effected by means of a series of pivoted pusher-fingers, 54, hung to rods 55, extending transversely between opposite slide-bars 56, which are suitably guided on the side frames of the machine and are connected to the upper ends of pivoted arms 57, a transverse rod, 58, connecting these arms, and this rod being coupled by rods 59 to eccentrics 60 on the shaft 17. The first acting fingers of the frames 56 are hooked fingers 61, which serve to catch the stave on its delivery from the bending-bed 3 and draw it forward into position to be acted upon by the first of the pusher-fingers 54, which feed it forward to the second fingers, and so on, the fingers passing over the staves on the backward movement.

The staves are delivered from the feedway into a barrel setting-up or forming machine of any suitable construction. The machine may, for instance, be of a character similar to the one forming the subject of application No. 225,328, dated January 24, 1887. When the proper number of staves have been fed into this setting-up machine, it is necessary to stop the operation of the feeding devices and other parts of the machine, and a like stoppage is necessary when a defective stave is delivered from the bending apparatus. For this reason we mount the spur-wheel 18 loosely on the shaft 17 and secure to said shaft outside of the spur-wheel a disk, 62, which carries a clutch-finger, 63, acted on by a spring, 52, and engaging with a recess, 53, in the face of the spur-wheel 18, as shown in Fig. 4.

The outer end of the clutch-finger is beveled, and in a suitable bearing, 64, adjacent to the end of the finger, is adapted to slide a stop-rod, 65, having a beveled head, 66. Under ordinary circumstances this head is withdrawn, as in Fig. 4, so as to be out of the path of the end of the clutch-finger 62; but when it is desired to stop the machine the rod is moved so as to bring its beveled head into the path of said stop-finger, which is thereby retracted and withdrawn from the recess in the spur-wheel 18, thus effecting the stoppage of the shaft 17 and of all the parts driven thereby.

When the feeding of the staves has been stopped for the purpose of permitting the setting up of the barrel, opportunity is afforded for boring the bung-hole in one of the staves, and for this purpose we mount on a suitable cross-bar, 67, a bearing, 68, for an auger-spindle, 69, the latter being driven in the present instance by bevel-gears 70 and 71 from a short shaft, 72, having a pulley, 73, for receiving a driving-belt. The auger-spindle 69 is splined in the hub of the bevel-wheel 70 and can be raised and lowered by means of a suitable lever, 74, the latter being operated by the attendant or by one of the attendants in charge of the setting-up machine.

If desired, the central bearing-bar, 10, of the second feedway may be dispensed with; but in this case we prefer to provide the guides 2 with bearing-rollers 49 for the ends of the stave, as shown in Fig. 10, for instance.

We claim as our invention—

1. The combination of stave-bending dies, a stave-feedway having opposite guides constructed to press upon the ends of the staves, and mechanism whereby the staves are fed from the bender to the guides and caused to traverse along the latter, all substantially as specified.

2. A stave-feedway in which are combined a central bar pressing upon one side of the stave at or near the middle and end bars pressing upon the opposite side of the stave at and near the ends of the same and having their bearing-surfaces in a different plane from that of the central bar, all substantially as specified.

3. The combination of the stave-bending

dies, the fingered feed-bars, means for reciprocating the latter, and stave-guides constructed to press upon the staves as they are being fed forward, all substantially as specified.

5 4. The combination of the stave-bending die with spring clips at the ends of the same for preventing undue recoil of the stave on the rise of the die, all substantially as specified.

10 5. The combination of a steam-box, a stave-feedway and endless feed-chain traversing said steam-box, a stave-receptacle, and means for conveying the staves from said receptacle to the feedway and chain, all substantially as specified.

15 6. The combination of the steam-box with the endless feed-chain and its sprocket-wheels, and a stave-feedway comprising upper and lower guides and curved connecting-guides concentric with the feed-chain at one end, all substantially as specified.

20 7. The combination of stave-bending dies, retainers for preventing undue recoil of the bent stave, a stave-feedway having bearings whereby the stave is held in bent form, and means for feeding the stave directly from the bending-dies into said stave-feedway, all substantially as specified.

30 8. The combination of a stave-feedway, a

reciprocating feed-bar having yielding presser-fingers, and elastic clips whereby the staves are prevented from moving backward on the retraction of said fingers, all substantially as specified.

35 9. The combination of opposite longitudinal feedways, means for intermittently feeding the staves along the same, an auger-spindle adapted to bearings located above the feedways and intermediate of the same, and means for rotating and reciprocating said spindle, all substantially as specified.

40 10. The combination of the main shaft of the machine, a loose driving-pinion thereon, a disk secured to the shaft and having a clutch-finger engaging said pinion, and a stop rod having a beveled head for engaging with said finger and moving it to disengage the pinion therefrom, all substantially as specified.

50 In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

MARIA E. BEASLEY.
GEO. REHFUSS.
J. GEORGE REHFUSS.
MARTIN O. REHFUSS.

Witnesses:

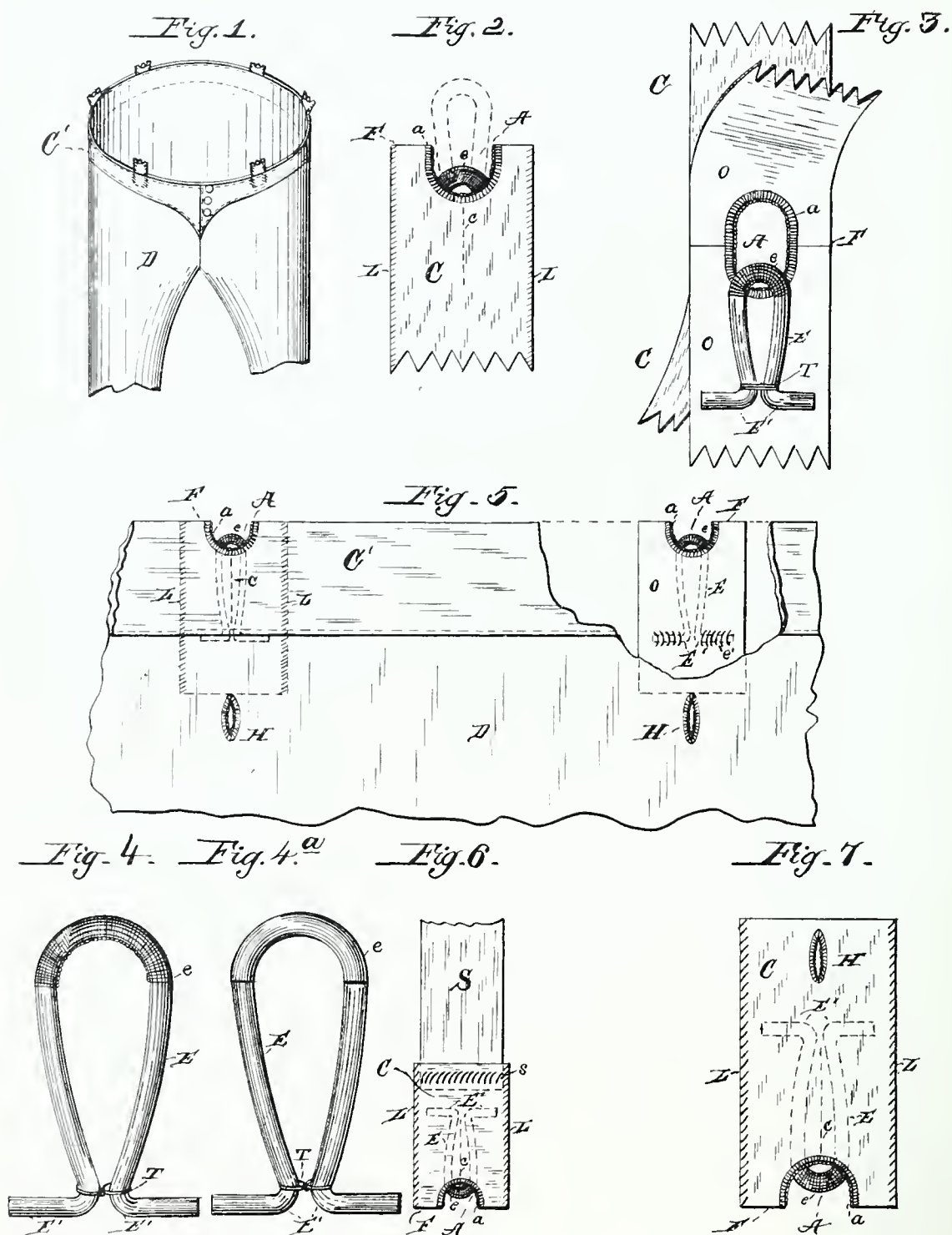
JOHN T. LEWIS,
HARRY SMITH.

(No Model.)

S. A. SAEGER.
BUTTON HOLE TAB.

No. 388,075.

Patented Aug. 21, 1888.



WITNESSES.

P. A. Hale.
J. M. Gill.

INVENTOR:

Gallie A. Saeger.
by N. L. Hollander, Attorney,

UNITED STATES PATENT OFFICE.

SALLIE A. SAEGER, OF ALLENTOWN, PENNSYLVANIA.

BUTTON-HOLE TAB.

SPECIFICATION forming part of Letters Patent No. 388,075, dated August 21, 1888.

Application filed April 28, 1888. Serial No. 272,190. (No model.)

To all whom it may concern:

Be it known that I, SALLIE A. SAEGER, a citizen of the United States, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Button-Hole Tabs; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to waistbands for drawers, shirts, trousers, and the like, and more especially to the button-holes formed therein or thereon; and it consists of an elastic loop sheathed in a case having a smooth interior face, when arranged, secured, and operating substantially as hereinafter described.

Heretofore "button-hole tabs" have been made and attached to waistbands or suspender-ends for serving the same general purpose; but the details of construction thereof differed materially from the present invention.

The following specification describes and the accompanying drawings illustrate what I consider the best means of carrying out my invention.

In the said drawings, Figure 1 is a general view of a pair of drawers with tabs containing my button-hole attached to and projecting above the waistband thereof. Fig. 2 is an enlarged view of the tab. Fig. 3 is a view of the interior of said tab when opened on the line of its upper end. Fig. 4 is a still further enlarged detail view of the elastic loop removed. Fig. 4^a is a similar view of the loop provided with the kid re-enforcement hereinafter described. Fig. 5 is a view of a waistband having the tabs set therein flush with its upper edge. Fig. 6 is a view of a suspender-end with the tab attached thereto. Fig. 7 is a view of the tab provided with an ordinary button-hole at one end, for a purpose to be described.

The same letters of reference with distinguishing supernumerals have been applied to similar parts in the several views.

D represents a pair of drawers, trousers, or overalls having a waistband, C', all of the or-

dinary construction, except as hereinafter specified. The tabs containing my button-hole are either attached to said waistband, as shown in Fig. 1, so that they will project above it, or are set into it, as in Fig. 5, so that their upper ends will be flush with the upper edge thereof. The former plan is more convenient where the tabs are to be quickly and perhaps temporarily applied to a garment constructed without them; but the latter makes a better, neater, and more serviceable job, and is preferable if the tab is applied at the time the garment is made.

Fig. 6 represents my tab applied to the lower end of a suspender-strap, which is either elastic or not, being secured thereto by stitches s.

Fig. 7 shows the tab with its body slightly elongated and provided at its rear end with an ordinary button-hole, H, whereby it may be secured to the collar of an overcoat or the lappel of a full-dress coat for obvious use in that connection in securing the collar in a storm or connecting the lappels.

The tab itself is preferably constructed as follows: A short piece of elastic cord, E, is bent into the form of an eye or loop, its body fastened at T by a strong thread, cord, or wire, and its ends E' projecting laterally away from the body. Around the upper end of the eye so formed is worked a number of button-hole stitches, e, for preventing the wearing of the button-shank upon the elastic cord. Instead of such button-hole stitches e, I sometimes secure a piece of kid, leather, or other tough material at this point. This forms a more durable device, but is more expensive.

The elastic is placed within a jacket, sheathing, cover, or case, O, of oil-cloth, heavy cambric, or some other fabric having a smooth glossy surface, and such surface is caused to lie next the elastic. Outside the sheathing O, I prefer to attach another cover, C, of any preferred or desired material, for adding strength and beauty to the tab. The two jackets O and C are of the same size and shape, folded on the transverse line F at their centers, secured along both sides by stitches L, cut away at the centers at A, forming a semicircular scallop when folded, as in Fig. 2, and sewed with button-hole stitches a around the edges of such scallop before they are folded together.

The elastic is secured within the sheathing O by a vertical row or line of stitches, *c*, passed through the four thicknesses of the jackets after the latter are folded together.

5 The elastic is placed in the sheathing in the position shown in Fig. 3, so that the upper or button-hole-stitched end of the eye extends into the scallop A just far enough to be grasped by the hand of the operator. It is secured in this position by the said line of stitches *c*, which extends from the edge of said scallop down within the elastic eye or loop to the cord T and is carried far enough to slightly stretch the elastic, so that it shall be held in place firmly. As additional means of fastening, however, the lateral ends E' of the elastic are secured by stitches *e'*, which preferably extend only through the sheathing O and are not visible after the cover C has been applied.

20 In the process of making this tab the elastic eye is first formed complete. The two jackets are next cut out and button-hole stitched at *a*. The eye is then put in place, the ends E' secured by the stitches *e'* through the sheathing only, the cord T grasped from below by a crochet-needle or similar instrument and drawn downwardly, the line of stitches *c* begun from the proper point at the lower end, the upper end of the eye grasped by said needle and drawn out, the line of stitches *c* carried up to the lower edge of the scallop A, the eye released and allowed to snap against the upper stitch *c*, and, finally, the two jackets are secured in closed position or condition by the side stitches, L. The tab may then be sewed to any waistband, suspender-end, or other point, or used as deemed desirable.

40 In Fig. 5 I have illustrated another application of my tab, as hereinbefore mentioned. In this case the construction is precisely the same, except that the cover C is omitted and for the time the inner and outer layers of the material of the waistband itself serve as such cover. This brings the fold F of the sheathing flush with the upper folded edge of the waistband, which is the cover in this instance, and, while all stitching is the same, a more perfect and desirable article is formed.

50 It will be obvious the tab may be used on the lower edge of blouse-waists or on vests and similar garments, and by setting the buttons some distance from the attaching-edge the flush form, Fig. 5, may be used without exposing the garment beneath. Indeed, if the scallop A be made deep enough, the buttons may be set very near the edge with no disagreeable results. I have also shown in Fig. 5 button-holes II located directly in line with the scallops of the tabs similar to those shown in Fig. 7. In this case, however, their use is slightly different. Being formed below the loop E at, say, two inches distance, if it is desired to raise the garment D for any reason, and hold it suspended at a more elevated height than by the loops E, the buttons are disengaged from the latter and inserted in the

holes II. The flush upper edge of waistband C' offers no objection to this new relative arrangement of parts, and the change may be effected without difficulty and with but little loss of time. It is true the same end would be accomplished with a double set of ordinary button-holes one above the other; but the liability of the lower tearing into the upper, as frequently occurs on straps buckled by a tongue-buckle, is entirely overcome, as the lateral ends E' of the loop and their fastening-stitches lie above the upper ends of the lower holes H and form a strong and durable brace therefor.

85 In operation the loop is grasped between the thumb and finger of the operator's hand and drawn out, as shown in dotted lines, Fig. 2. It is then pushed over and around the button and allowed to snap back to place. In doing so it embraces the button-shank and draws it down against the lower end of the scallop A, where it is surrounded on all sides by button-hole stitches *c* and *a*, and from which position it cannot possibly escape. To unbutton, the operation is reversed with ease.

95 Modifications may be made to a considerable extent without departing from the principle or sacrificing the advantages of my invention.

What I claim as new is—

1. As a new article of manufacture, a button-hole tab comprising a sheathing of smooth fabric having a scallop in its upper end for engaging the shank of the button on its lower side, an elastic cord, E, secured by a cord, T, to form a loop, the whole located within said sheathing and its free end extending normally into said scallop and adapted to engage said shank upon its upper side, and a line of stitches, *c*, passing through the two thicknesses of said sheathing and extending within said loop from the cord T to the lower edge of said scallop, as and for the use and purpose described.

2. The elastic loop E, in combination with the folded sheathing composed of a smooth fabric, the cover upon the exterior of said sheathing, both said jackets being provided with a scallop in their upper folded ends, two sets of button-hole stitches, *a*, uniting the sheathing and cover around the edge of said scallop, one set on either side of the interior space, a line of stitching, L, at each side uniting the four edges of sheathing and cover, and a line of stitches, *c*, passing through the four thicknesses and extending longitudinally within said loop from its inner end to the bottom of the scallop, the whole arranged and adapted for use substantially as described.

3. As a new article of manufacture, the herein-described button-hole tab, the same comprising the sheathing O, the elastic loop E therein, the lower ends, E', of said loop being connected by a cord, T, and extending from said point of connection laterally outward, and the stitches *e'*, securing said ends within said sheathing, in combination with a

cover upon the exterior of said sheathing and
secured thereto by side stitches, L, said tab
having an ordinary button-hole, H, extending
through the four thicknesses of sheathing and
5 cover and located below and in line with the
loop E, and a line of stitches, c, passing through
the four thicknesses of said sheathing and
cover and extending longitudinally within
said loop from the cord T to the upper end of

the tab, as and for the use and purpose set
forth.

In testimony whereof I affix my signature in
presence of two witnesses.

SALLIE A. SAEGER.

Witnesses:

LIZZIE L. WHEELER,

A. L. BIERY.

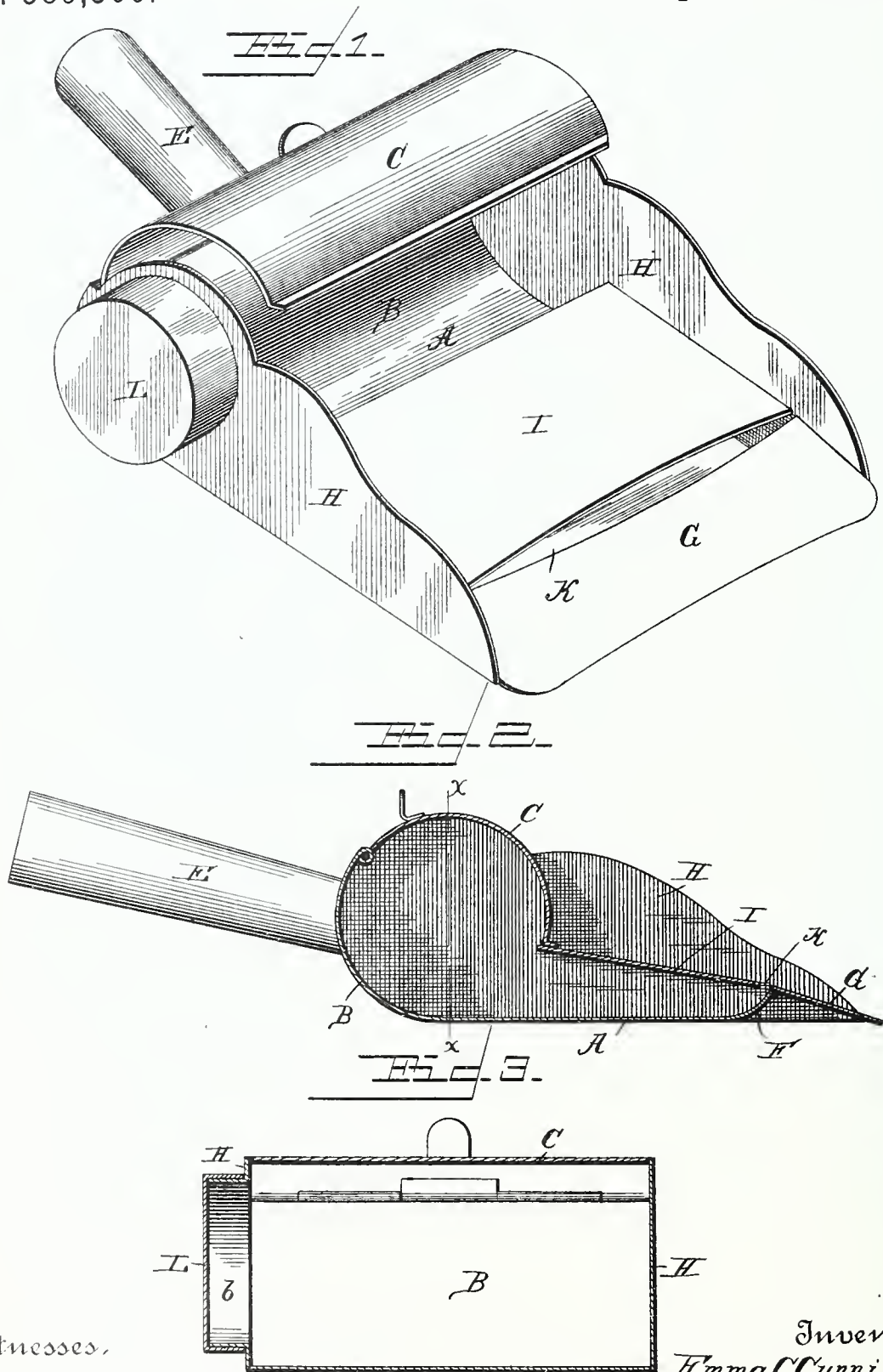
(No Model.)

E. C. CUNNINGHAM.

DUST PAN.

No. 389,366.

Patented Sept. 11, 1888.



Witnesses,

Henry G. Dietrich.

C. E. Doyle.

Inventor,

Emma C. Cunningham

A

By her Attorneys

C. A. Howard & Co.

UNITED STATES PATENT OFFICE.

EMMA C. CUNNINGHAM, OF ALTOONA, PENNSYLVANIA.

DUST-PAN.

SPECIFICATION forming part of Letters Patent No. 389,366, dated September 11, 1888.

Application filed April 3, 1888. Serial No. 269,423. (No model.)

To all whom it may concern:

Be it known that I, EMMA C. CUNNINGHAM, a citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented new and useful Improvements in Dust-Pans, of which the following is a specification.

My invention relates to improvements in dust-pans; and it has for its object to provide a simple device whereby the dust, dirt, &c., is received in a suitable receptacle, from which it may be readily and quickly emptied without danger of spreading the dirt.

The invention consists in a certain novel construction and arrangement of devices, fully set forth hereinafter in connection with the accompanying drawings, wherein—

Figure 1 is a perspective view of the dust-pan. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view taken on the line *x x* of Fig. 2.

Referring to the drawings, A represents the flat horizontal bottom of the pan, which is turned up at its rear edge to form the lower and rear sides of the cylindrical receptacle B; and C represents the lid of the said receptacle, which closes down over its upper side and is provided with a thumb hold to enable it to be raised. The handle E of the pan is attached rigidly to the rear side of the said receptacle.

The front edge of the bottom A is turned up a short distance to form a shoulder, F, and an inclined lip, G, is attached to the upper edge of this shoulder, and is adapted, when the bottom A is flat on the floor, to bear on the floor. The dust which is brushed upon the pan is carried by the said lip over the shoulder F, behind which it drops to prevent it from being shaken or accidentally jarred from the pan.

The dust pan is provided with vertical sides H H, between which and a short distance above the bottom A is arranged the top or covering plate I, the front edge of which approaches to within a short distance of the shoulder F, and thereby forms a slot, K, the function of which will be hereinafter mentioned. The hinged lid C closes down on the rear edge of the top or covering plate, whereby the dust contained in the receptacle cannot escape.

The cylindrical receptacle projects at one end slightly beyond the side of the pan to form a flange, *b*, and the cap I fits on the said flange and closes the end of the receptacle.

When the pan is in use, the sand, ashes, and other heavy or granulated dirt drop through the slot K and are received in the space between the covering-plate and the bottom of the pan, from which they cannot readily be removed owing to the shoulder, and the dirt or dust which will not easily pass through the said slot is brushed across the plate I and into the receptacle at the rear edge thereof. By thus forming two openings I provide for the more ready and effectual entrance of the dust and dirt into the receptacle, as a large portion of the dust and dirt will pass through the slot K and thus be prevented escaping from under the broom or brush, and that portion which does not pass through the slot will pass over the upper edge of the plate I.

To empty the dust-pan, close the hinged lid, shake all the dirt into the cylindrical receptacle by raising the pan at its front edge, and then, after removing the cap from the end of the said cylindrical receptacle, empty the dirt therethrough. Thus all the dirt may be removed, and it may be emptied into a stove or other receptacle without danger of spreading.

Having thus described my invention, I claim—

The improved dust-pan herein described and shown, comprising the bottom A, having the shoulder F at its front end, the inclined lip G, attached to said shoulder and extending downward and forward therefrom, the sides H H, the cylindrical receptacle at the rear ends of the bottom and the sides, the inclined plate I, secured between the sides and having its front edge arranged adjacent to the shoulder F, and the hinged lid C of the cylindrical receptacle adapted to close down upon the rear edge of said plate, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

EMMA C. CUNNINGHAM.

Witnesses:

WM. S. HAMMOND,
HARRY NIXDORF.

(No Model.)

2 Sheets—Sheet 1.

C. B. DARLEY.

TOY BEDSTEAD.

No. 390,008.

Patented Sept. 25, 1888.

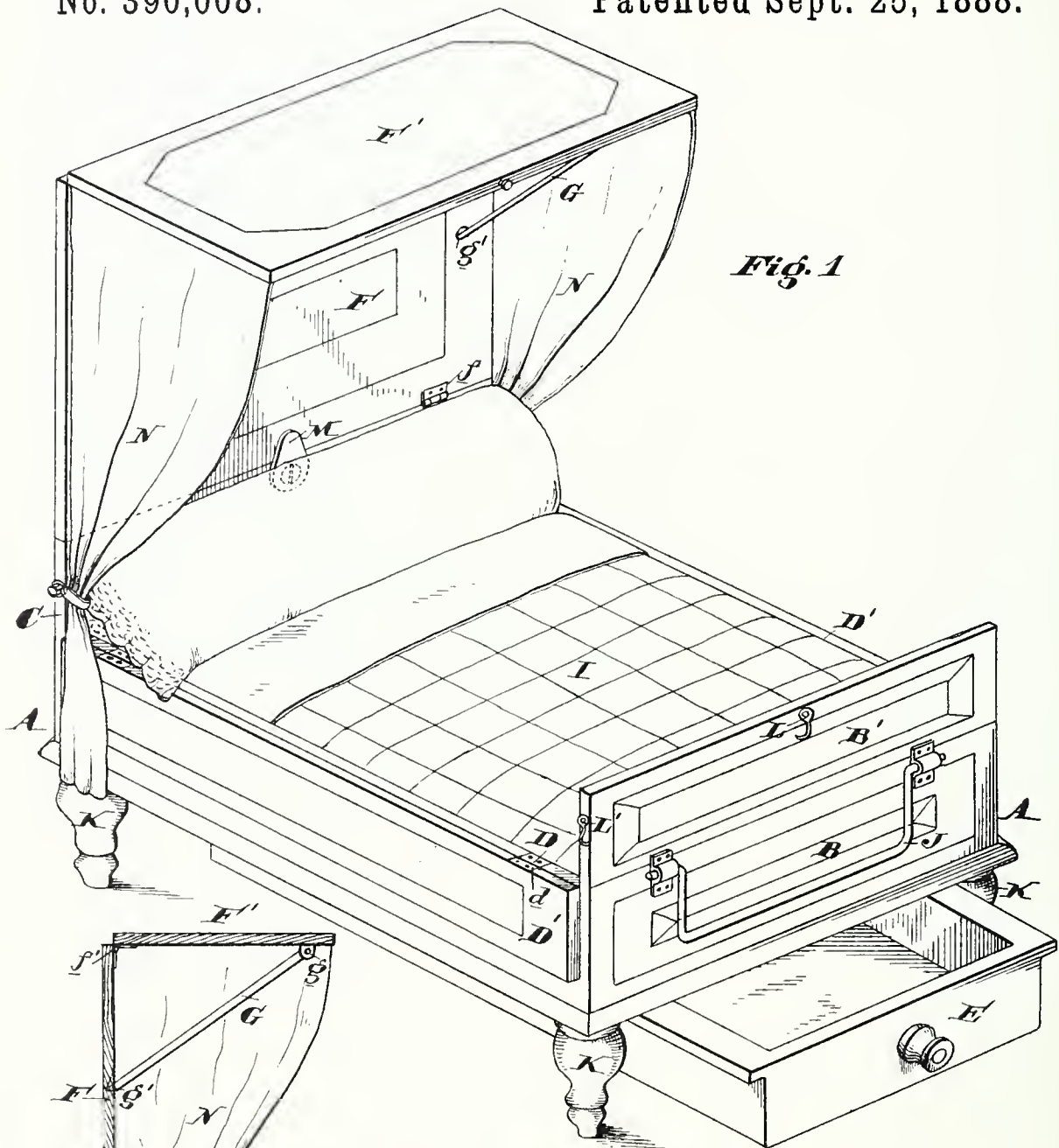


Fig. 1

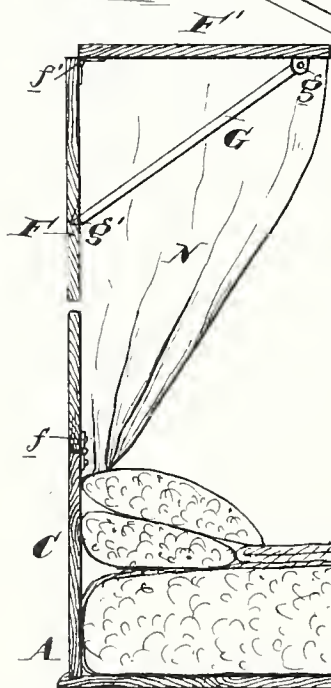


Fig. 2

Witnesses:
James J. Gray
Joshua M. Klock Jr.

B Inventor:
Celia B. Darby
by her attorney
Francis T. Chambers

(No Model.)

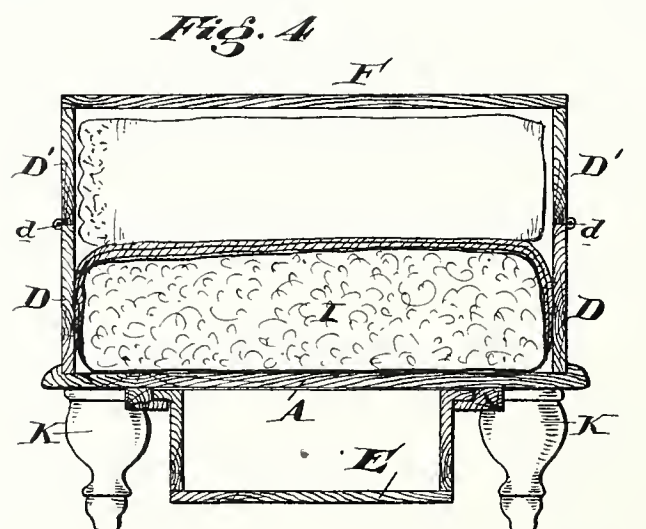
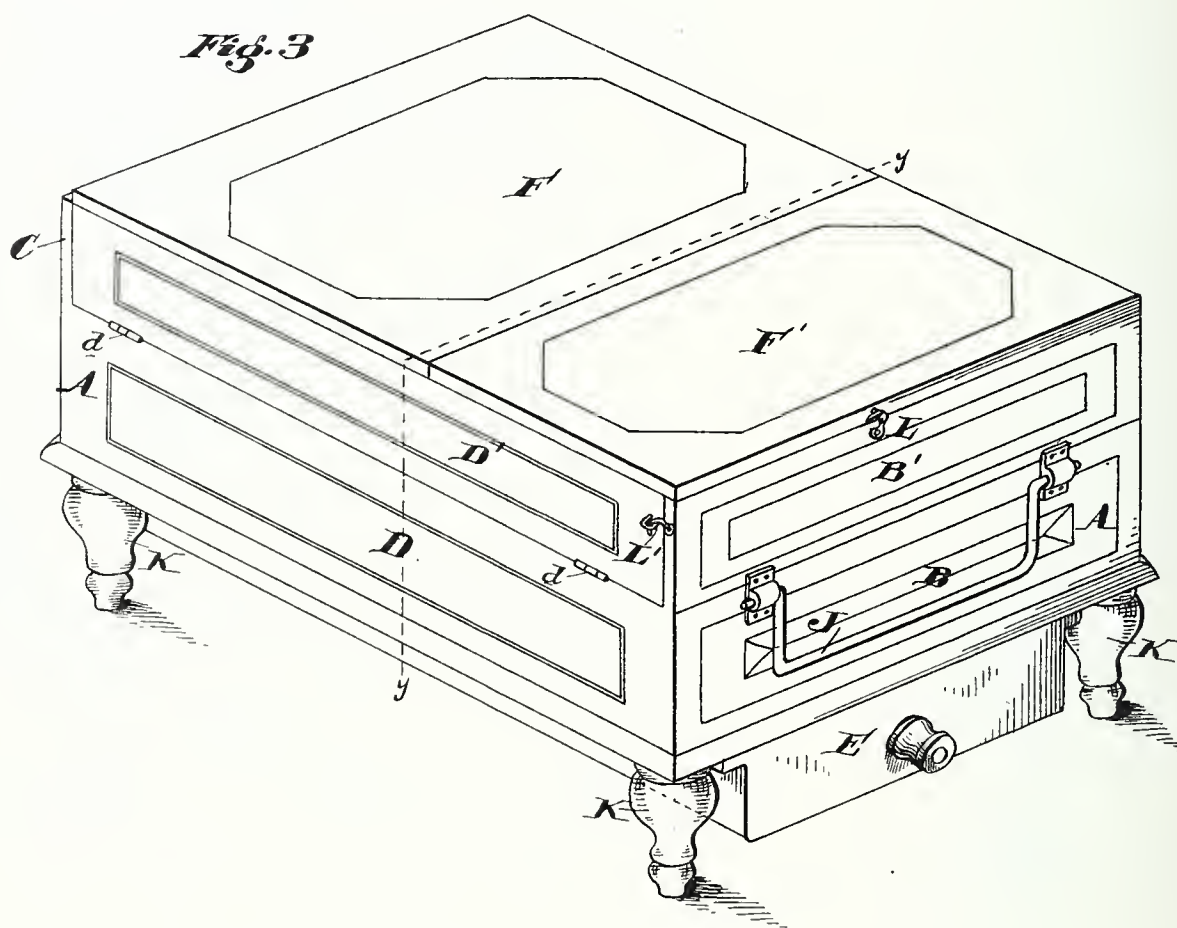
2 Sheets—Sheet 2.

C. B. DARLEY.

TOY BEDSTEAD.

No. 390,008.

Patented Sept. 25, 1888.



Witnesses:

James J. King
Joshua M. Black Jr.

Inventor:

Cecilia B. Darley
by her attorney
Francis T. Chambers

UNITED STATES PATENT OFFICE.

CECELIA B. DARLEY, OF PHILADELPHIA, PENNSYLVANIA.

TOY BEDSTEAD.

SPECIFICATION forming part of Letters Patent No. 390,008, dated September 25, 1888.

Application filed June 23, 1888. Serial No. 217,972. (No model.)

To all whom it may concern:

Be it known that I, CECELIA B. DARLEY, of the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Toy Bedstead, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to the construction of a toy bedstead for dolls; and my object is to provide a toy bedstead so constructed that it can be folded up in the form of a box to contain the doll and opened out into the form of a bedstead; also, to combine with such a toy a drawer in which the doll's clothes can be contained.

Reference is now had to the drawings, which illustrate my invention, and in which—

Figure 1 is a perspective view of the toy bedstead opened up and with the drawer partially open. Fig. 2 is a central longitudinal section of the toy; Fig. 3, a perspective view of the same in its closed condition, and Fig. 4 a cross section thereof.

A indicates the box or main frame of the toy bedstead.

B B' indicate the end of the box which serves as the foot-board for the bed; C, the opposite end of the box, serving as the head-board of the toy bed; D D', the sides of the box, forming the side rails of the bed, and preferably made in two pieces, D and D', hinged together, as at *d*, so that the upper part, D', can be folded down upon the portion D, as shown in Fig. 1.

E is the drawer, which I secure in guides beneath the bottom of box A and between the legs K K, &c., of the bedstead.

F F' constitute the lid of the box, as shown in Fig. 3, when closed down. The portion F is hinged at *f f* to the top of the head-board C, while the portion F' is hinged at *f' f'* to the top of the portion F. The portion F of the cover serves as a prolongation of the head-board C when the bedstead is open, a fastening device—such as M, Fig. 1—being used to hold it in an upright position. Preferably I provide a support, G, by which the portion F' of the box-cover can be supported at right angles to the portion F when the toy bed is

open. This support can be hinged to F' at *g* and a small shoulder, *g'*, provided on the portion F of the cover, upon which it can rest, as shown in Fig. 2. Where the portion F' of the cover is arranged to project over the bed when it is opened, as shown in the drawings, I prefer to secure upon it curtains N N, which of course will fold inside the box when it is shut up, and which, when it is opened into the form of a bedstead, will give a pretty effect and conceal the supporting device G.

J is a handle, which I prefer to secure upon the foot-board of the toy bed, and by which it and its contents can be easily carried when folded up in the box form shown in Fig. 3.

I indicates the bedding, which, as will be seen, leaves plenty of space between it and the top F F' of the box to contain the doll when the bed is shut up into the box form.

L indicates a fastening device for securing the cover F F' to the foot-board B B' when the toy bed is shut up into the box form.

L' indicates, also, a fastening device for holding up the hinged portion D' of the sides D D' when the bed is closed up into a box.

It is not essential that the upper portions, D', of the sides should be hinged to the lower portions, D, although I prefer to construct them in this way. Neither is it essential that the portion F' of the cover should be supported at right angles to the portion F when the bed is opened out, although I also prefer to include devices for so supporting it, as shown.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A toy bedstead consisting of a box, A, having legs K K, &c., and ornamented to resemble a bed, in combination with a lid, F F', hinged together and to one end of the box, as specified, a fastening device, M, for supporting the portion F of the lid parallel with the end of the box when it is open, and a fastening device, L, for holding the lid closed.

2. A toy bedstead consisting of a box, A, having legs K K, &c., and ornamented to resemble a bed, in combination with a lid, F F', hinged together and to one end of the box, as specified, a fastening device, M, for supporting the portion F of the lid parallel with the end

of the box when it is open, a fastening device, L, for holding the lid closed, a drawer, E, secured in guides beneath the box A, and a handle, J, secured to the end of said box.

5 3. A toy bedstead consisting of a box, A, having legs K K, &c., and ornamented to resemble a bed, in combination with a lid, F F', hinged together and to one end of the box, as specified, a fastening device, M, for supporting
10 the portion F of the lid parallel with the end of the box when it is open, a fastening device, G, for securing the portion F' of the lid at right angles to the portion F when the lid is open, and a fastening device, L, for holding the
15 lid closed.

4. A toy bedstead consisting of a box, A, provided with legs K K, &c., having one end, B B', ornamented to resemble the foot-board of a bed, one end, C, made to resemble the head-
20 board of a bed, and side pieces, D D', hinged together so that the portion D' will fold down upon the portion D, as specified, in combination with a lid, F F', the portion F of which is hinged to the head board C and the portion
25 F' to the portion F, a fastening device, M, to support the portion F' of the lid in an upright

position, a fastening, L, to secure the lid F F' when closed down, and fastenings L', to secure the side pieces, D', in an upright position.

5. A toy bedstead consisting of a box, A, 30 provided with legs K K, &c., having one end, B B', ornamented to resemble the foot-board of a bed, one end, C, made to resemble the head-board of a bed, and side pieces, D D', hinged together so that the portion D' will fold down 35 upon the portion D, as specified, in combination with a lid, F F', the portion F of which is hinged to the head-board C and the portion F' to the portion F, a fastening device, M, to support the portion F' of the lid in an upright 40 position, a fastening, G, arranged to support the portion F' of the lid at right angles to the portion F thereof, and curtains N N, secured on the inside of the portion F of the lid, a fastening, L, to secure the lid F F' when closed 45 down, and fastenings L', to secure the side pieces, D', in an upright position.

CECELIA B. DARLEY.

Witnesses:

JNO. G. R. McELROY,

FRANCIS T. S. DARLEY.

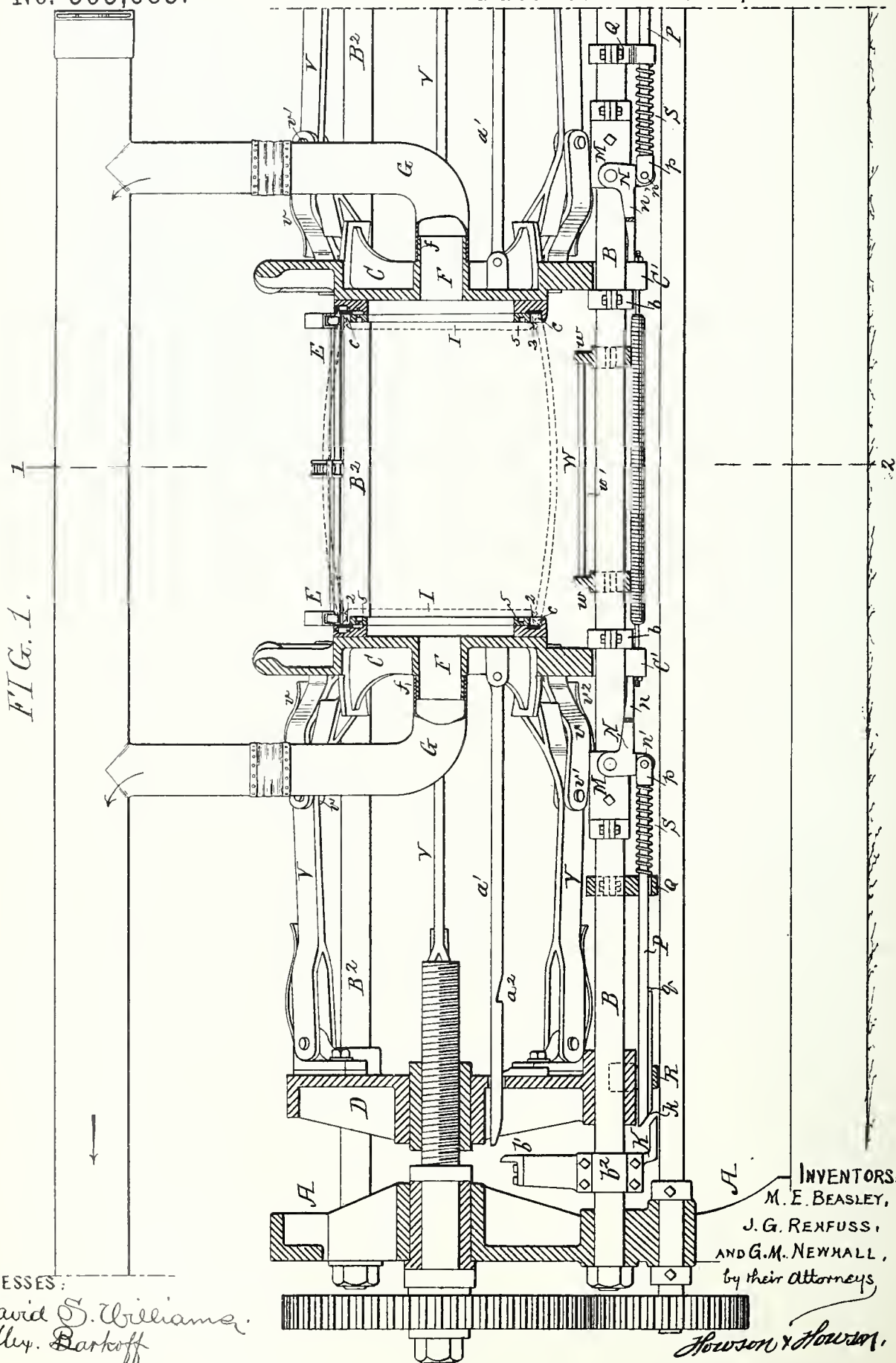
(No Model.)

3 Sheets—Sheet 1.

M. E. BEASLEY, J. G. REHFUSS & G. M. NEWHALL.
BARREL SETTING-UP MACHINE.

No. 393,683.

Patented Nov. 27, 1888.



WITNESSES:

David S. Williams.
Wm. Barhoff

A INVENTORS.
M. E. BEASLEY,
J. G. REXFUSS,
AND G. M. NEWHALL,
by their Attorneys,

Howson & Howson.

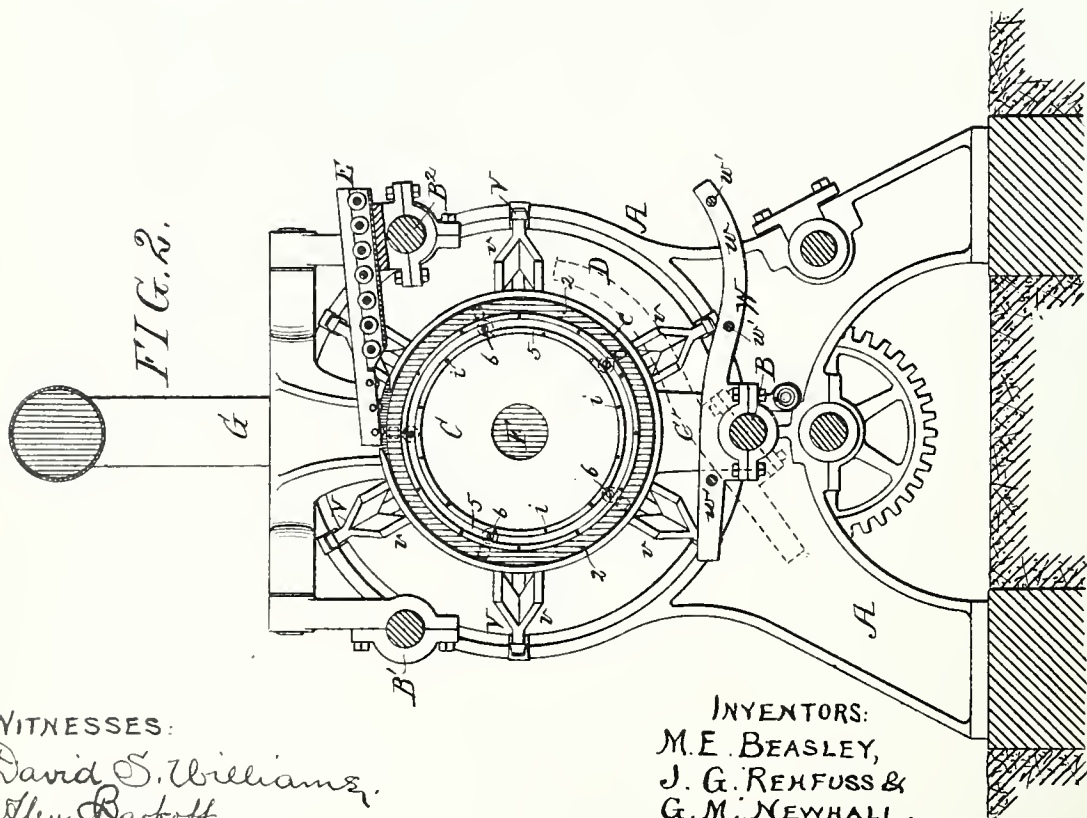
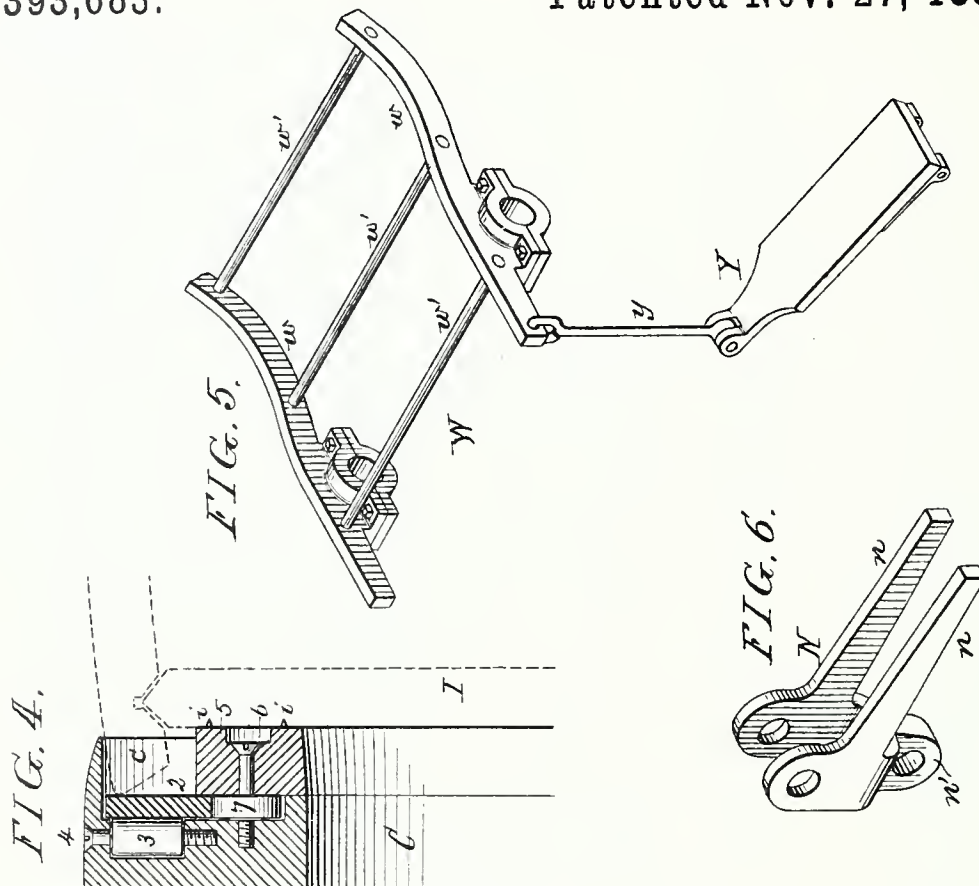
(No Model.)

3 Sheets—Sheet 2.

M. E. BEASLEY, J. G. REHFUSS & G. M. NEWHALL.
BARREL SETTING-UP MACHINE.

No. 393,683.

Patented Nov. 27, 1888.



WITNESSES:
David S. Williams,
Alex. Barkoff.

INVENTORS:
M. E. BEASLEY,
J. G. REHFUSS &
G. M. NEWHALL,
by Their Attorneys
Howson & Howson

(No Model.)

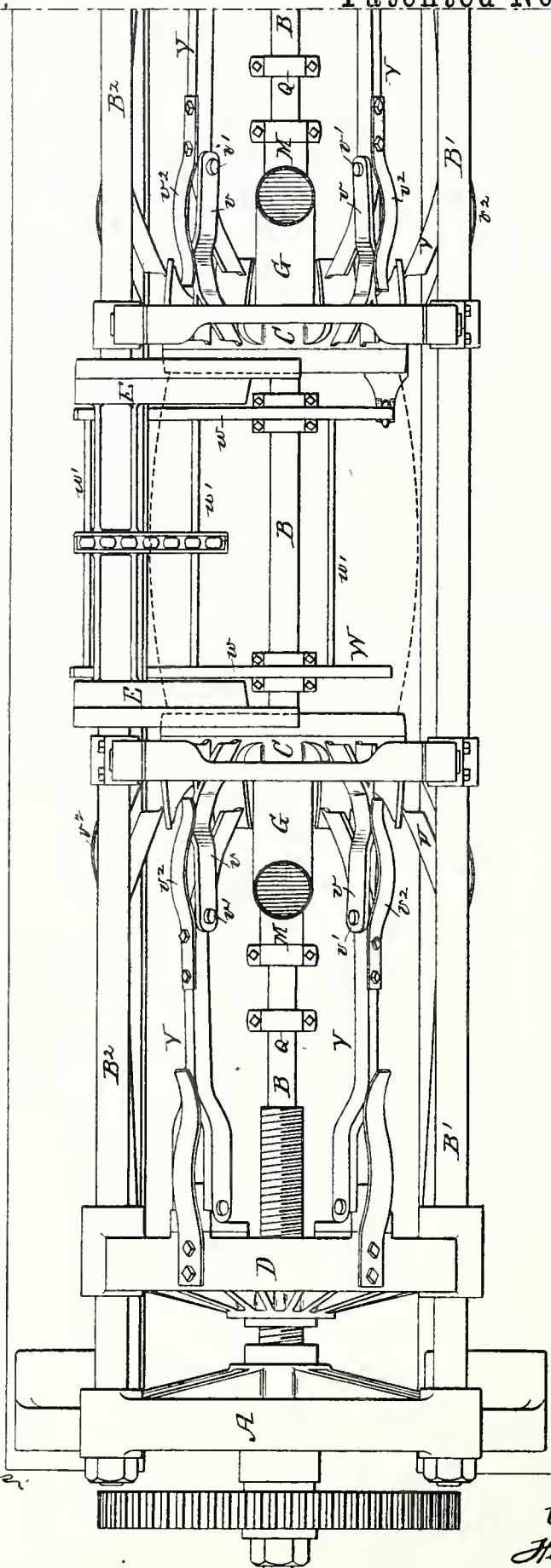
3 Sheets—Sheet 3.

M. E. BEASLEY, J. G. REHFUSS & G. M. NEWHALL.
BARREL SETTING-UP MACHINE.

No. 393,683.

Patented Nov. 27, 1888.

FIG. 3.



WITNESSES:
David S. Williams,
Ally Barkoff,

INVENTORS:
M. E. BEASLEY,
J. G. REHFUSS &
G. M. NEWHALL,
by their Attorneys
Hewson & Hewson,

UNITED STATES PATENT OFFICE.

MARIA E. BEASLEY, JOHN GEORGE REHFUSS, AND GEORGE M. NEWHALL,
OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO THE AMERICAN
BARREL AND STAVE COMPANY, OF CAMDEN, NEW JERSEY.

BARREL-SETTING-UP MACHINE.

SPECIFICATION forming part of Letters Patent No. 393,683, dated November 27, 1888.

Application filed March 19, 1888. Serial No. 267,709. (No model.)

To all whom it may concern:

Be it known that we, MARIA E. BEASLEY, JOHN GEORGE REHFUSS, and GEORGE M. NEWHALL, all citizens of the United States, and residents of Philadelphia, Pennsylvania, have invented certain Improvements in Barrel-Setting-Up Machines, of which the following is a specification.

Our invention consists of certain improvements in the barrel-making or barrel-setting-up machinery for which application for Letters Patent was filed on the 24th day of January, 1887, Serial No. 225,328; and our present improvements comprise certain mechanism for allowing the free rotation of the staves in the heads, mechanism for automatically locking the stave-receiving heads in place and releasing them at the proper moment, mechanism for forcing the hoops upon the barrel, and devices for delivering the barrel when completed.

In the accompanying drawings, Figure 1 is a longitudinal section of sufficient of a barrel-setting-up machine to illustrate our invention. Fig. 2 is a transverse section on the line 1 2, Fig. 1. Fig. 3 is a plan view. Fig. 4 is an enlarged sectional view of part of one of the stave-receiving heads, and Figs. 5 and 6 are detached perspective views of parts of the machine.

We will not describe in detail the construction of the machine shown, and we have also omitted from the drawings a number of the details of the driving-gear, which are fully shown in the aforesaid application.

The fixed frame of the machine consists of two end frames, A, secured together by longitudinal bolts or rods B B' B²—three in the present instance.

C C are the stave-receiving heads, pivoted to brackets on the rods B' B², and D D are the hoop-driving heads, each actuated by a screw similar to that shown in the above-mentioned application, the head having a nut to which the screw is adapted, and said screw being driven in one direction to advance the head and in the opposite direction to retract it. Each head C has an annular groove, c, into which the staves are inserted from the feed-way E, and in each groove c is a loose ring, 2, (shown in Fig. 4,) and back of this ring are a

series of anti-friction rollers, 3, mounted on suitable pins, 4. The ring is held in place by a second ring, 5, which overlaps the ring 2, and is secured to the permanent part of the head C by means of screws or bolts 6, which pass through and carry anti-friction rollers 7, the latter serving to support and prevent lateral play of the ring, so that it is kept at all times in a position concentric with the axis of the head.

When the staves are fed into the grooves c, their ends bear against the rings 2 in the grooves, so that the pressure is transmitted to the rings, and said rings move with the staves as the latter are fed around the heads, thus materially reducing the power necessary to feed the staves around the heads, owing to the anti-friction bearings of the rings 2. Friction-rollers alone may be used, against which the ends of the staves may bear, but these would have to be placed very close together; hence we prefer in all cases to use the ring 2.

The stave-receiving heads C have a central opening, F, and connected to a flange, f, around each opening is a pipe, G, which communicates with an exhaust-pipe, H, so that a partial vacuum may be maintained in the pipes G.

As shown by dotted lines in Fig. 4, the heads I of the barrel are placed in position on the rings 5 of the stave-receiving heads C, so that the partial vacuum created within the rings will serve to hold the heads of the barrel in position upon the stave-receiving heads while the staves are being fed around the same, pins i, Fig. 4, preventing the heads I from turning. This special construction is shown and described more fully, and is claimed, in an application for a patent filed March 12, 1888, Serial No. 267,010.

We have found that owing to the difference in the force exerted upon the barrel by the opposite hoop-drivers when driving on the hoops a spring for holding the two stave-receiving heads together is not practicable at all times. For instance, if a barrel happens to be a trifle larger at one end than the other the hoop-drivers meet with more resistance at said larger end and consequently the barrel will be forced longitudinally by said drivers, the spring will

be stretched, and the barrel moved out of place. We have therefore provided an automatic lock for the heads, which can only be thrown out at a certain portion of the return-stroke of the hoop-drivers.

On the lower tie-rod, B, we secure sleeves M, to which are pivoted levers N, each having two arms, n , as shown in the perspective view, Fig. 6, these arms bearing normally against extensions C' of the heads C. Arms n' of the levers N are connected to rods P, which pass through bearings Q, bolted to the tie-rod B, and also through bearings R, bolted to the hoop-driving heads D. On the rods P are stiff springs S, which bear against yokes p on the rods, while the opposite ends of the springs are in contact with the stationary bearings Q, so that the springs will at all times tend to keep the arms n of the levers N in the position shown in Fig. 1. Each rod P has an offset or catch, q , and is tapered at its outer end, k , which is adapted to ride upon an inclined plane, K, secured to a bracket, b^2 , bolted to the rod B.

The heads C C are drawn back in precisely the same manner as described in the aforesaid application, a guided rod, a' , being pivoted to each head and passing through an orifice in the head D, and each rod is notched at a^2 to engage with a projection on the head when the latter is advanced.

The end of each rod is tapered, and when the head D on its retraction draws the rod back to a certain point the tapered portion of the rod comes in contact with a shoe, b' , on the bracket b^2 and is lifted thereby, thus releasing the head C and allowing it to swing by gravity back into its normal position. Previous to the engagement of the head D with the notch a^2 , however, the bearing R, engaged with the notch q on the rod P, so that draft was imparted to said rod and to the arm n' of the lever N, the arm n of the latter being thus swung down clear of the head C before the rod a' is operated upon to withdraw said head C, and as soon as the head D has traveled so far rearward as to effect a partial retraction of the head C the end of the bar P is lifted by the inclined plane K, so that said bar is released from the bearing R, thus permitting the spring S to act on the lever N and swing the arm n of the same up into position to engage with the head C as soon as the latter is released from the control of the head D and swung back into its normal position, a sleeve, b , on the tie-rod B preventing undue forward movement of the head.

Adapted to the lower tie-rod, B, is a cradle, W, Figs. 2 and 5, formed of two levers, w , tied together by rods w' . The long arms of these levers we prefer to curve somewhat in the shape of the barrel. One of the levers w is connected to a treadle, Y, by a link, y , so that when the barrel has been set up and hooped, and previous to the withdrawal of the stave-receiving heads, the cradle may be moved to the position shown by dotted lines in Fig.

2, the attendant pressing his foot upon the treadle to effect this movement. As the barrel falls, therefore, the shipper held in this position will guide the barrel in the proper direction—that is, outward in front of the machine.

Each of the hoop-drivers is provided with a supplemental driver, v , pivoted at v' to the main driver V, and provided with a spring, v^2 , which is secured to the driver V and bears against the supplemental driver, tending to force it down against the staves when it is driving a hoop into place.

By this construction two hoops can be driven on each end of the barrel simultaneously. The two hoops are placed upon the heads C C previous to the feeding of the staves into the machine. When enough staves for a barrel have been fed into the machine, the bilge-hoops are drawn from the heads C onto the ends of the barrel by hand, so that when the hoop-drivers are fed toward the barrel the drivers v act first on the bilge-hoops, and when the latter are fairly started the drivers V commence to force on the other hoops. When both hoops have been forced on sufficiently, the movement of the drivers is reversed and they are retracted to their normal positions.

We claim as our invention—

1. The combination of the stave-receiving head having an annular groove into which the staves are fed, with an anti-friction surface forming the base of the groove and providing a bearing for the ends of the staves, all substantially as described.

2. The combination of the stave-receiving head having a stave-receiving groove, with a ring free to turn therein and against which the ends of the staves bear while they are being fed around the heads of the barrel, all substantially as specified.

3. The combination of the stave-receiving head having an annular groove, a ring therein, and anti-friction rollers at the rear of said ring, all substantially as and for the purpose set forth.

4. The combination of the stave-receiving head having an annular groove therein, a bearing-ring for the ends of the staves, anti-friction rollers forming a backing for said ring, and rollers forming an internal peripheral bearing for the ring, all substantially as specified.

5. The combination of the stave-receiving head having an annular groove, the bearing-ring therein, and a ring overlapping said bearing-ring and adapted to hold it in place in the groove, substantially as described.

6. The combination, in a barrel-setting-up machine, of a stave-receiving head, a hoop-driving head, a lever bearing upon the stave-receiving head and serving to lock the same in operative position, and a rod or bar connected to said locking-lever and acted upon by the hoop-driving head on its rearward movement, substantially as described.

7. The combination of a stave-receiving

- head, a hoop-driving head, a lever bearing upon the stave-receiving head and serving to lock the same in operative position, a rod or bar connected to the lever and engaging with the hoop-driving head, and a spring for restoring the locking-lever to its normal position when the operating-rod is released from the control of the hoop-driving head, all substantially as specified.
8. The combination of a stave-receiving head, a hoop-driving head, a lever for locking said stave-receiving head in its operative position, rods connected to the locking-lever and to the stave-receiving head and engaging successively with the hoop-driving head on its backward movement, whereby the stave-receiving head is first unlocked and then retracted, all substantially as specified.
9. The combination of the stave-receiving head, the hoop-driving head, a lever engaging with said stave-receiving head and serving to lock the same in operative position, a rod connected to said lever and engaging with the hoop-driving head on its backward movement, a trip plate for releasing the rod from the control of the hoop-driving head, and a spring for restoring the locking-lever to its normal position on the release of its operating-rod, all substantially as specified.
10. The combination of the stave-receiving head, the hoop-driving head, a lever engaging with the stave receiving head and locking the same in operative position, rods connected to said locking-lever and to the stave-receiving head and engaging successively with the hoop driving head as the latter is retracted, and trippers acting successively first upon the rod of the lever and then upon the rod of the stave-receiving head to release them from the control of the hoop-driving head, all substantially as specified.
11. The combination, in a barrel-setting-up machine, of the stave-receiving heads, the hoop-driving heads, a cradle located between the stave receiving heads and pivoted to the frame of the machine, and a treadle connected to said cradle, whereby on depressing the treadle the cradle is adjusted to form an inclined plane on which the barrel can roll from the machine when released from the stave-receiving head, all substantially as specified.
- In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.
- MARIA E. BEASLEY.
JOHN GEORGE REHFUSS.
GEORGE M. NEWHALL.
- Witnesses:
WILLIAM D. CONNER,
HARRY SMITH.

(No Model.)

H. A. BLANCHARD.

CORSET CORD FASTENER.

No. 394,817.

Patented Dec. 18, 1888.

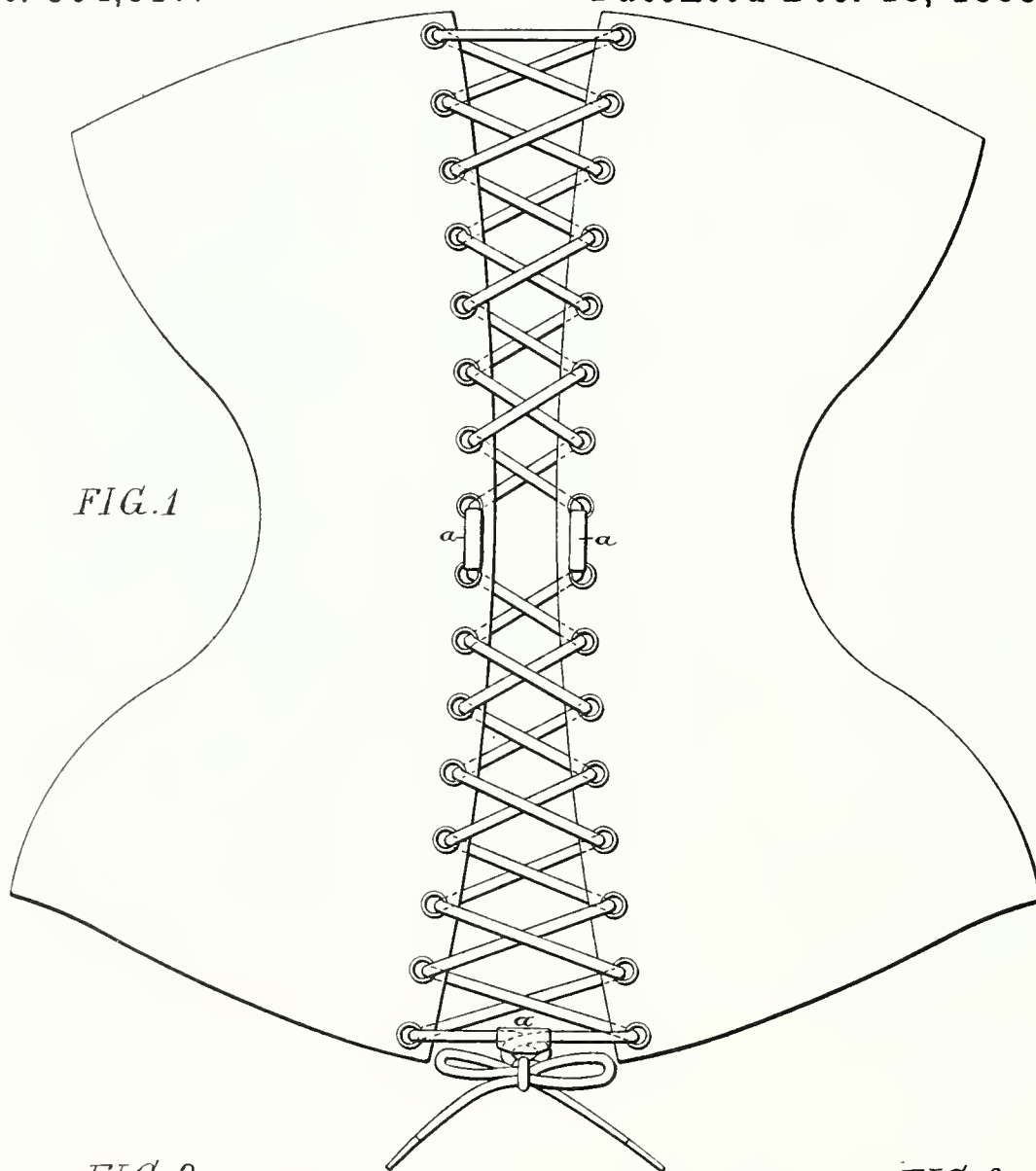


FIG. 2.

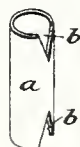


FIG. 3.

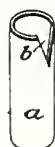


FIG. 4.

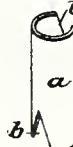


FIG. 8.

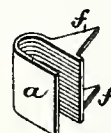


FIG. 5.



FIG. 6.



FIG. 7.

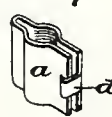


FIG. 9.



Witnesses:
Hamilton O. Turner,
John E. Paver,

Inventor:
Helen A. Blanchard
by her Attorneys
Howson & Son

UNITED STATES PATENT OFFICE.

HELEN A. BLANCHARD, OF PHILADELPHIA, PENNSYLVANIA.

CORSET-CORD FASTENER.

SPECIFICATION forming part of Letters Patent No. 394,817, dated December 18, 1888.

Application filed June 21, 1886. Serial No. 205,748. (No model.)

To all whom it may concern:

Be it known that I, HELEN A. BLANCHARD, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Corset-Cord Retainers, of which the following is a specification.

One object of my invention is to provide a corset-cord with a retainer whereby the slipping of the cord from a loose to a tight portion of the lacing is prevented without the necessity of tying the cord; and a further object is to provide a simple, inexpensive, and compact retainer for the cord. These objects I attain in the manner hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a view of a corset, the lacing-cord of which is provided with retainers in accordance with my invention; Fig. 2, a perspective view of the retainer; and Figs. 3 to 9, inclusive, views showing other forms of retainer within the scope of my invention.

In lacing a corset it is frequently desirable to draw the lacing-cord tighter at one part than another. For instance, the upper portion of the corset may be laced tight and the lower portion looser, or the reverse may be the case. Unless the cord is prevented from slipping at a point between the tight and loose portions of the lacing, however, the corset will not remain in condition as laced, for the tension upon the cord in the tightly-laced portion of the corset will cause it to take up slack from the loose portion of the lacing, with the result of soon equalizing the tension upon the cord from top to bottom of the corset. In order to prevent this it is a common practice to tie the cord at the waist, or to form loops or knots in the cord at this point; but this is objectionable on account of the bulk of such tie, loop, or knot, which causes a protuberance at that portion of the dress of the wearer, where a smooth neat fit is most desirable. In order to overcome this objection I apply to the cord retainers which will serve to prevent the slipping of the same, and will lie closely against the corset.

As shown in Figs. 1 and 2, each retainer consists of a short tube, *a*, of such diameter as to fit snugly to the lacing-cord, like an elongated eyelet, tapered notches *b* being

formed in one side of this tube at top and bottom, into which notches the cord wedges itself, and by reason of which the slipping of the cord through the retainer is prevented. It will therefore be seen that as the cord cannot slip through the retainer, and the latter cannot pass through the eyelet-holes of the corset, the tension of one portion of the lacing cannot affect or be affected by the tension of the other portion.

Various modifications may be made in the form of the retainer within the scope of my invention. For instance, the tube may have but one recess, *b*, as shown in Fig. 3, or the recesses may be on opposite sides, as in Fig. 4, and the tube may, if desired, be flattened, as in Fig. 5, or a spring-clasp may take the place of the tube, such clasp being shown, for instance, in Figs. 6 and 7, the latter clasp having a catch-finger, *d*, to prevent accidental spreading of the clasp. The inner faces of these clasps may be toothed or roughened to prevent accidental slipping of the lacing-cord through the same.

In addition to being threaded upon the cord, the retainer may be secured to the corset itself, if desired; and in Fig. 8 I have shown a retainer in the form of a spring-clasp having projecting fins or tongues *f*, whereby it may be secured to the corset, or the retainer may be constructed for being secured to the corset by sewing, as shown, for instance, in Fig. 9.

It may be advisable to apply a retainer to the crossed cords before tying the same at the bottom of the corset, as shown in Fig. 1, so as to prevent slipping of the cord if the knot should become untied.

I claim as my invention—

1. The combination of a corset with a single lacing-cord having the surplus at the end of the lacing, and retainers threaded upon the lacing-cord and occupying a position at or about the waist of the corset, each retainer having a portion for engaging with the cord and preventing the slipping of the same, all substantially as specified.

2. The combination of a corset, a single lacing-cord having the surplus at the end of the lacing, and retainers occupying a position at or about the waist of the corset, and each consisting of a slide threaded upon the lacing-

cord and nicked to receive and retain a portion of said cord, all substantially as specified.

3. The within-described lacing-cord retainer, the same consisting of a slide adapted to be threaded upon the cord and having a tapering notch for receiving and retaining a portion of the cord, all substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HELEN A. BLANCHARD.

Witnesses:

WILLIAM D. CONNER,

HARRY SMITH.

(No Model.)

H. A. BLANCHARD.

CORSET CORD FASTENER.

No. 394,817.

Patented Dec. 18, 1888.

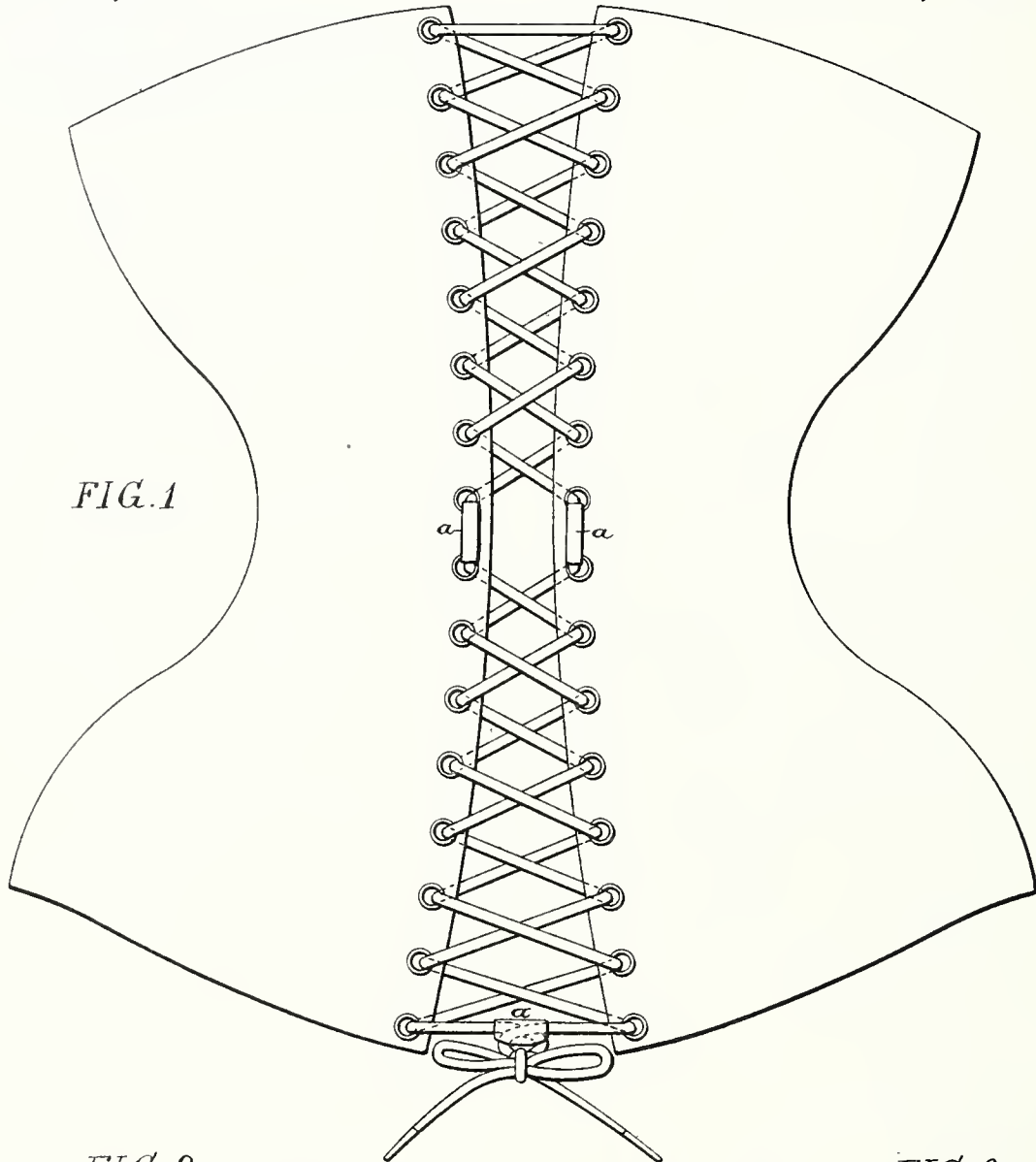


FIG. 1

FIG. 2.

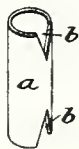


FIG. 3.



FIG. 4.



FIG. 8.



FIG. 5.



FIG. 6.

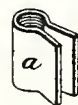


FIG. 7.

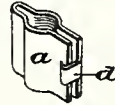


FIG. 9.



Witnesses:
Hamilton D. Turner.
John E. Paver.

Inventor:
Helen A. Blanchard
by her Attorneys
Howson & Son

UNITED STATES PATENT OFFICE.

HELEN A. BLANCHARD, OF PHILADELPHIA, PENNSYLVANIA.

CORSET-CORD FASTENER.

SPECIFICATION forming part of Letters Patent No. 394,817, dated December 18, 1888.

Application filed June 21, 1886. Serial No. 205,748. (No model.)

To all whom it may concern:

Be it known that I, HELEN A. BLANCHARD, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Corset-Cord Retainers, of which the following is a specification.

One object of my invention is to provide a corset-cord with a retainer whereby the slipping of the cord from a loose to a tight portion of the lacing is prevented without the necessity of tying the cord; and a further object is to provide a simple, inexpensive, and compact retainer for the cord. These objects I attain in the manner hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a view of a corset, the lacing-cord of which is provided with retainers in accordance with my invention; Fig. 2, a perspective view of the retainer; and Figs. 3 to 9, inclusive, views showing other forms of retainer within the scope of my invention.

In lacing a corset it is frequently desirable to draw the lacing-cord tighter at one part than another. For instance, the upper portion of the corset may be laced tight and the lower portion looser, or the reverse may be the case. Unless the cord is prevented from slipping at a point between the tight and loose portions of the lacing, however, the corset will not remain in condition as laced, for the tension upon the cord in the tightly-laced portion of the corset will cause it to take up slack from the loose portion of the lacing, with the result of soon equalizing the tension upon the cord from top to bottom of the corset. In order to prevent this it is a common practice to tie the cord at the waist, or to form loops or knots in the cord at this point; but this is objectionable on account of the bulk of such tie, loop, or knot, which causes a protuberance at that portion of the dress of the wearer, where a smooth neat fit is most desirable. In order to overcome this objection I apply to the cord retainers which will serve to prevent the slipping of the same, and will lie closely against the corset.

As shown in Figs. 1 and 2, each retainer consists of a short tube, *a*, of such diameter as to fit snugly to the lacing-cord, like an elongated eyelet, tapered notches *b* being

formed in one side of this tube at top and bottom, into which notches the cord wedges itself, and by reason of which the slipping of the cord through the retainer is prevented. It will therefore be seen that as the cord cannot slip through the retainer, and the latter cannot pass through the eyelet-holes of the corset, the tension of one portion of the lacing cannot affect or be affected by the tension of the other portion.

Various modifications may be made in the form of the retainer within the scope of my invention. For instance, the tube may have but one recess, *b*, as shown in Fig. 3, or the recesses may be on opposite sides, as in Fig. 4, and the tube may, if desired, be flattened, as in Fig. 5, or a spring-clasp may take the place of the tube, such clasp being shown, for instance, in Figs. 6 and 7, the latter clasp having a catch-finger, *d*, to prevent accidental spreading of the clasp. The inner faces of these clasps may be toothed or roughened to prevent accidental slipping of the lacing-cord through the same.

In addition to being threaded upon the cord, the retainer may be secured to the corset itself, if desired; and in Fig. 8 I have shown a retainer in the form of a spring-clasp having projecting fins or tongues *f*, whereby it may be secured to the corset, or the retainer may be constructed for being secured to the corset by sewing, as shown, for instance, in Fig. 9.

It may be advisable to apply a retainer to the crossed cords before tying the same at the bottom of the corset, as shown in Fig. 1, so as to prevent slipping of the cord if the knot should become untied.

I claim as my invention—

1. The combination of a corset with a single lacing-cord having the surplus at the end of the lacing, and retainers threaded upon the lacing-cord and occupying a position at or about the waist of the corset, each retainer having a portion for engaging with the cord and preventing the slipping of the same, all substantially as specified.

2. The combination of a corset, a single lacing-cord having the surplus at the end of the lacing, and retainers occupying a position at or about the waist of the corset, and each consisting of a slide threaded upon the lacing-

cord and nicked to receive and retain a portion of said cord, all substantially as specified.

3. The within-described lacing-cord retainer, the same consisting of a slide adapted to be threaded upon the cord and having a tapering notch for receiving and retaining a portion of the cord, all substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HELEN A. BLANCHARD.

Witnesses:
WILLIAM D. CONNER,
HARRY SMITH.

(No Model.)

12 Sheets—Sheet 1.

M. L. NICHOLS.
GRAIN BINDING HARVESTER.

No. 381,080.

Patented Apr. 10, 1888.

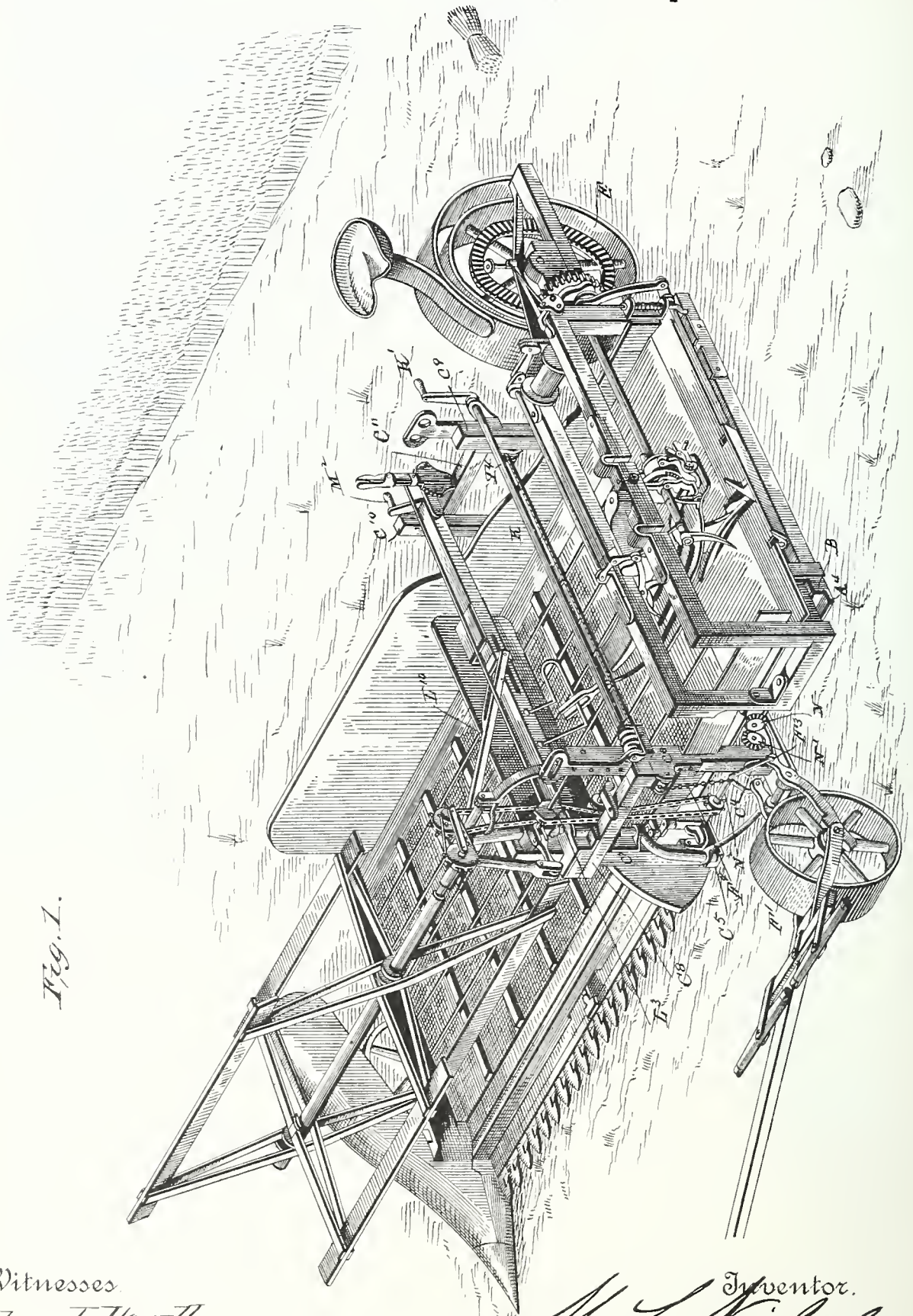


Fig. 1.

Witnesses.
Edwin T. Yewell,
Wm. J. H. Muntz

Inventor.
M. L. Nichols.
By his Attorney.
Alex. Mahon.

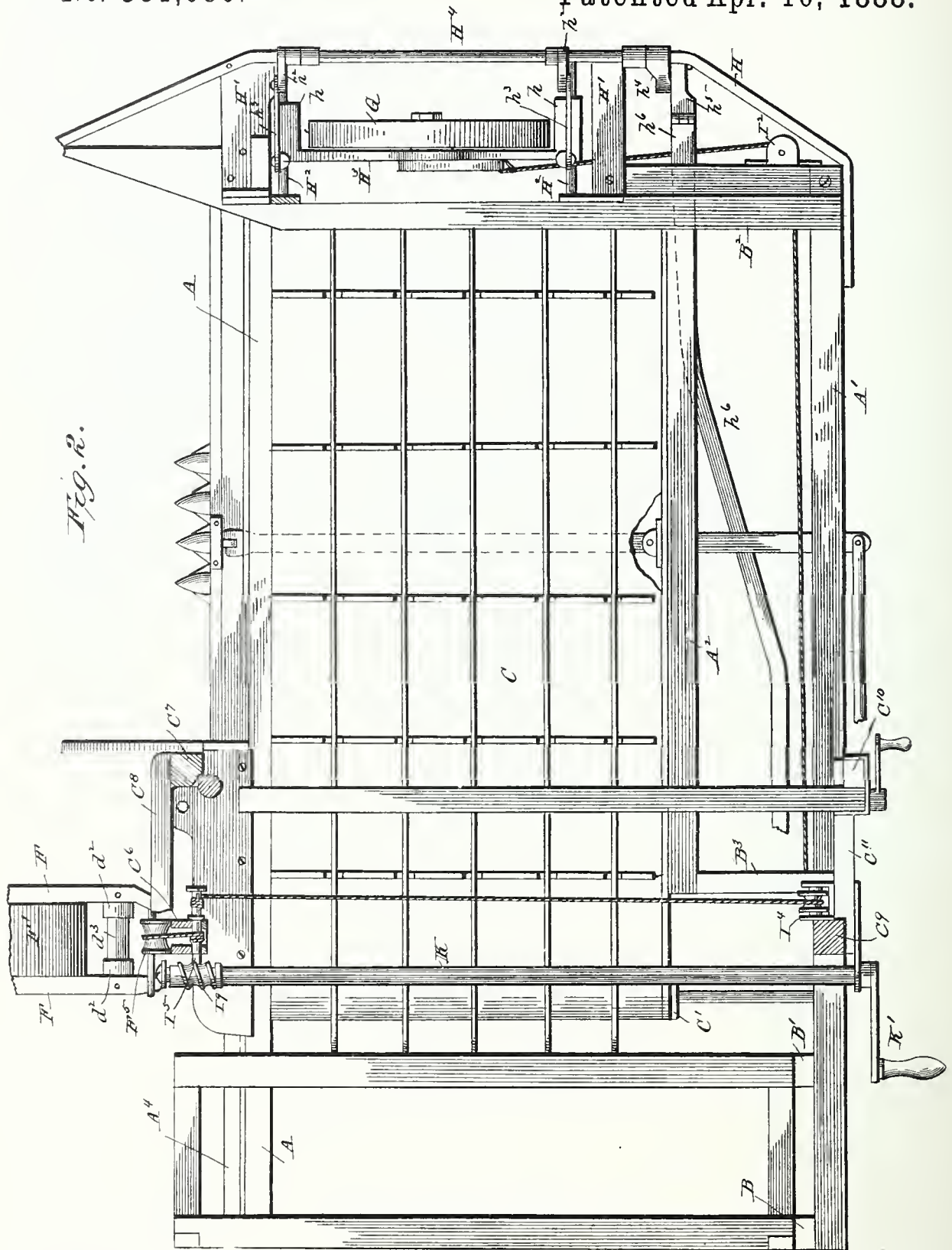
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12 Sheets—Sheet 2.

M. L. NICHOLS.
GRAIN BINDING HARVESTER.

No. 381,080.

Patented Apr. 10, 1888.



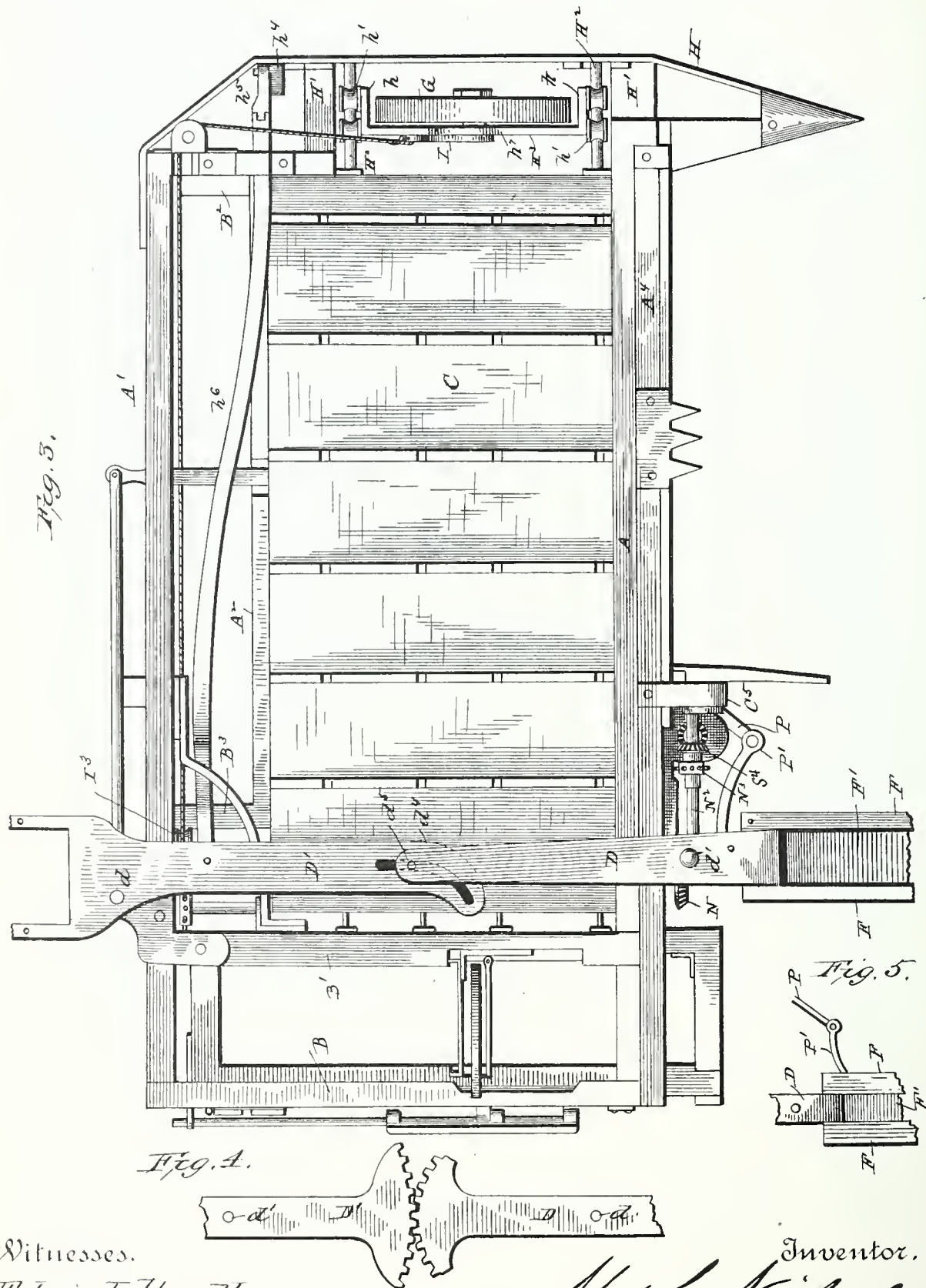
Witnesses
Edwin T. Jewett,
Wm. J. Spurr

Inventor,
M. L. Nichols.
By his Attorney,
Alex. Mahan.

M. L. NICHOLS.
GRAIN BINDING HARVESTER.

No. 381,080.

Patented Apr. 10, 1888.



Witnesses.

Edwin I. Yewell,
Wm. J. Huntmann.

Inventor.

M. L. Nichols.

By his Attorney.

Alex. Mahon.



(No Model.)

12 Sheets—Sheet 4.

M. L. NICHOLS.
GRAIN BINDING HARVESTER.

No. 381,080.

Patented Apr. 10, 1888.

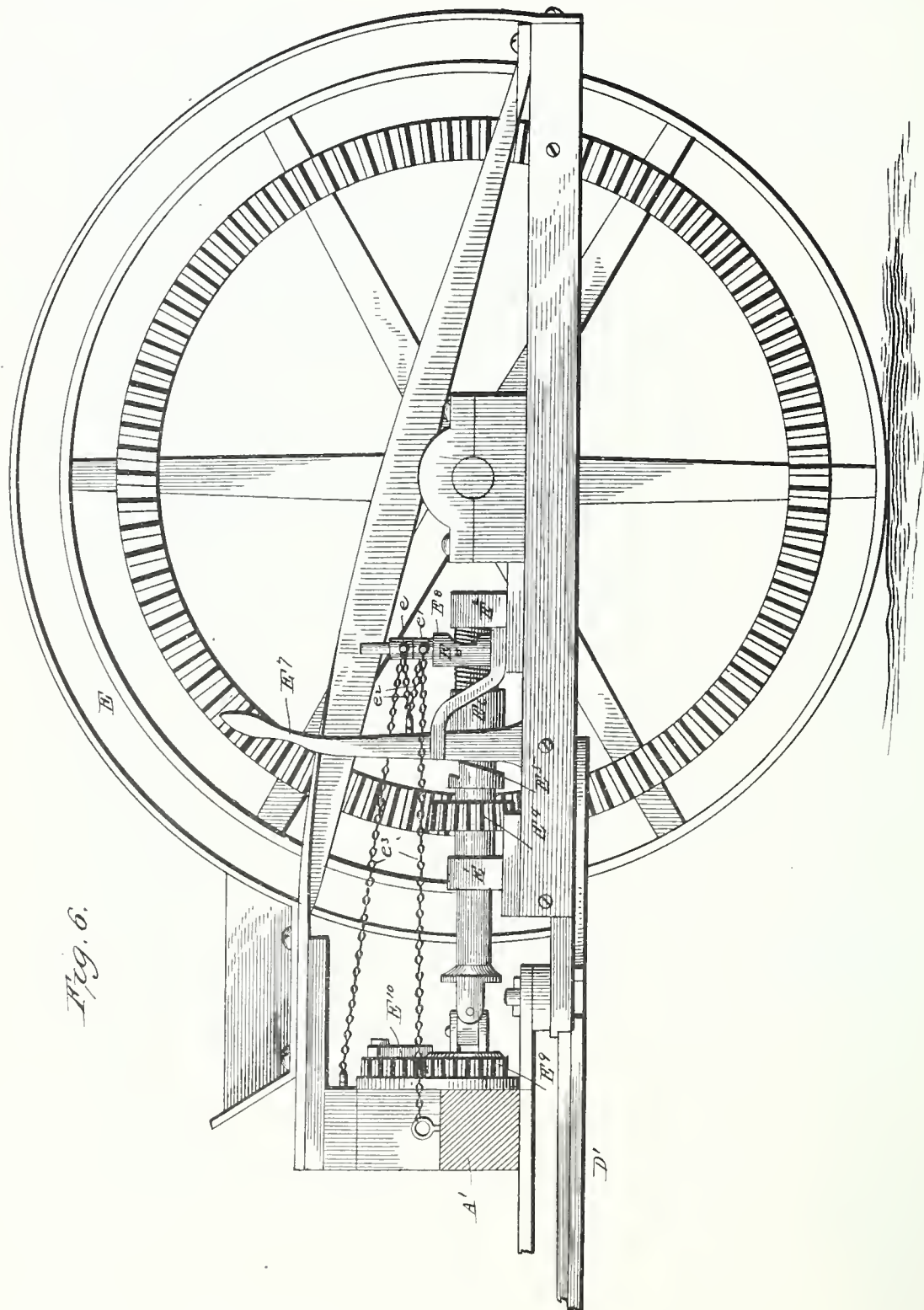


Fig. 6.

Witnesses.

Edwin T. Jewell,
Wm. J. Huntman.

Inventor,
M. L. Nichols.
By his Attorney,
Alex. Mahon.

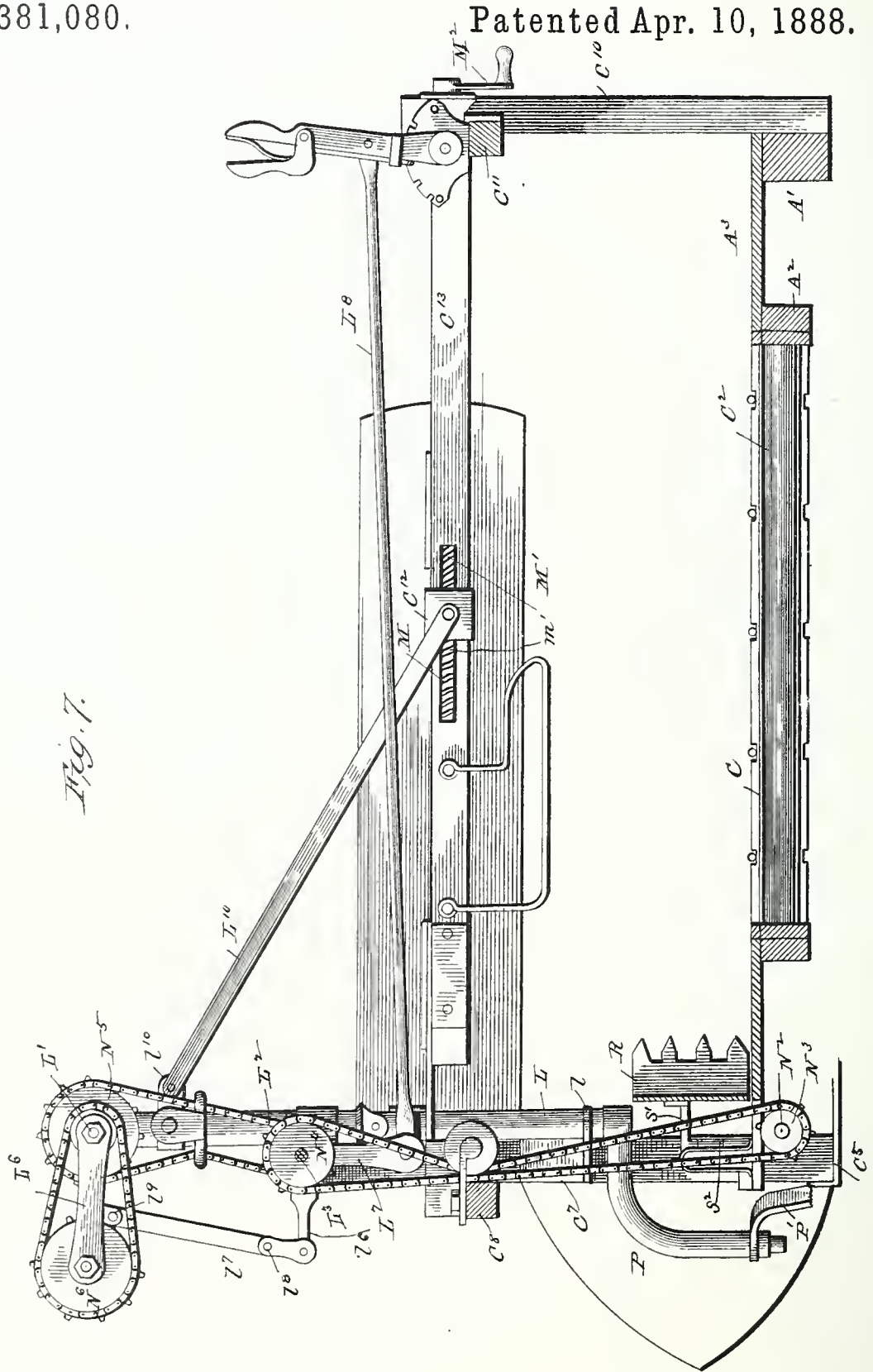
(No Model.)

12 Sheets—Sheet 5.

M. L. NICHOLS.
GRAIN BINDING HARVESTER.

No. 381,080.

Patented Apr. 10, 1888.



Witnesses,
Edwin T. Yewett,
Wm. J. Huntmann.

Inventor,
M. L. Nichols.
By his Attorney,
Alex. Mahon.

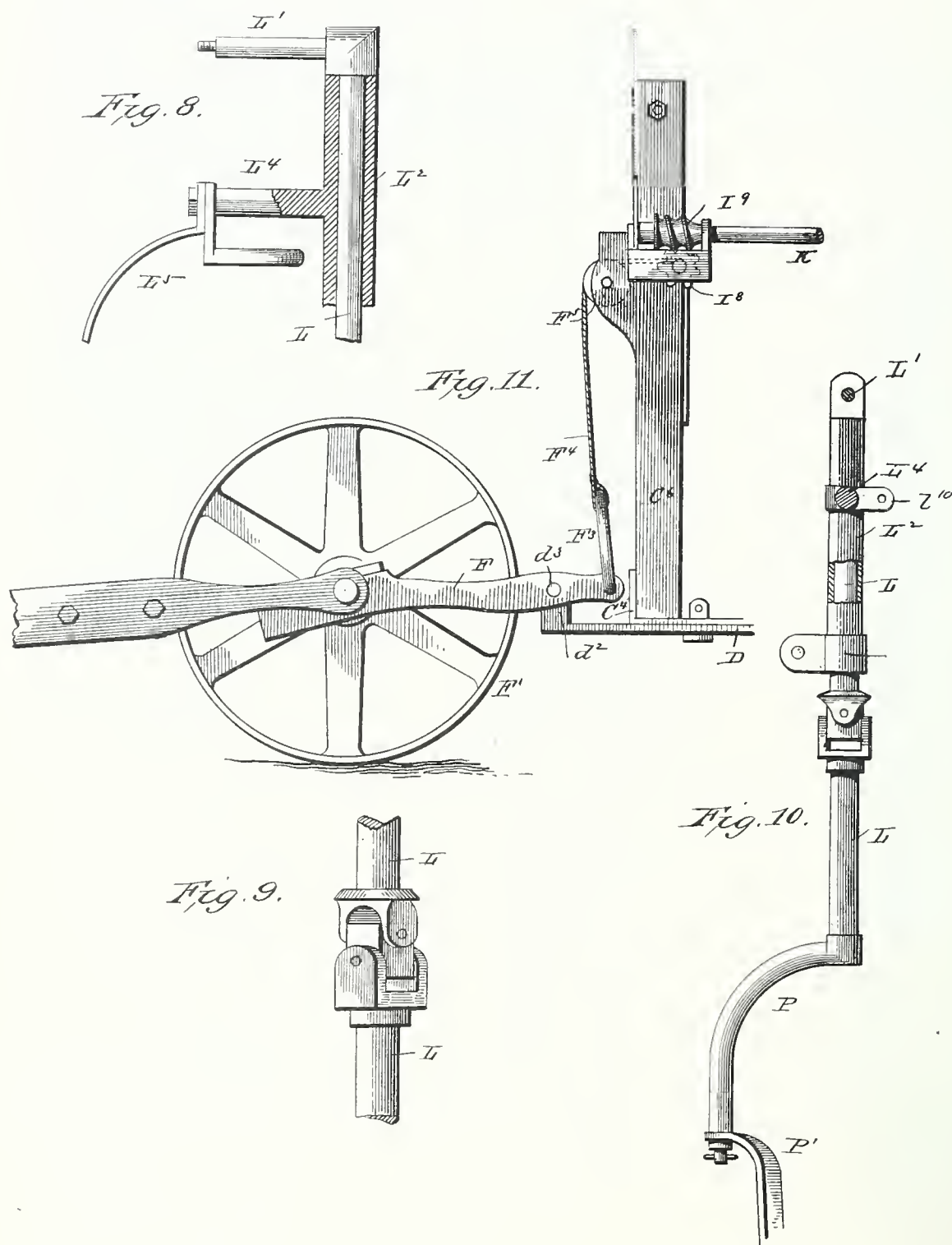
(No Model.)

12 Sheets—Sheet 6.

M. L. NICHOLS.
GRAIN BINDING HARVESTER.

No. 381,080.

Patented Apr. 10, 1888.



Witnesses
Edwin I. Jewell,
Wm. J. Huntmann

Inventor.
M. L. Nichols.
By his Attorney.
Alex. Mahon.

(No Model.)

12 Sheets—Sheet 7.

M. L. NICHOLS.
GRAIN BINDING HARVESTER.

No. 381,080.

Patented Apr. 10, 1888.

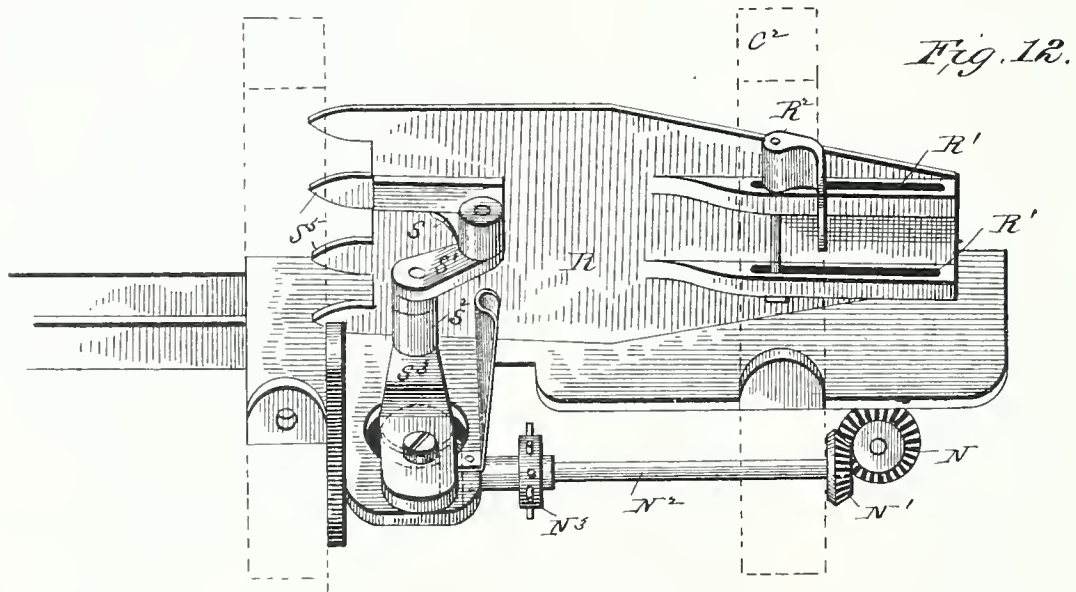
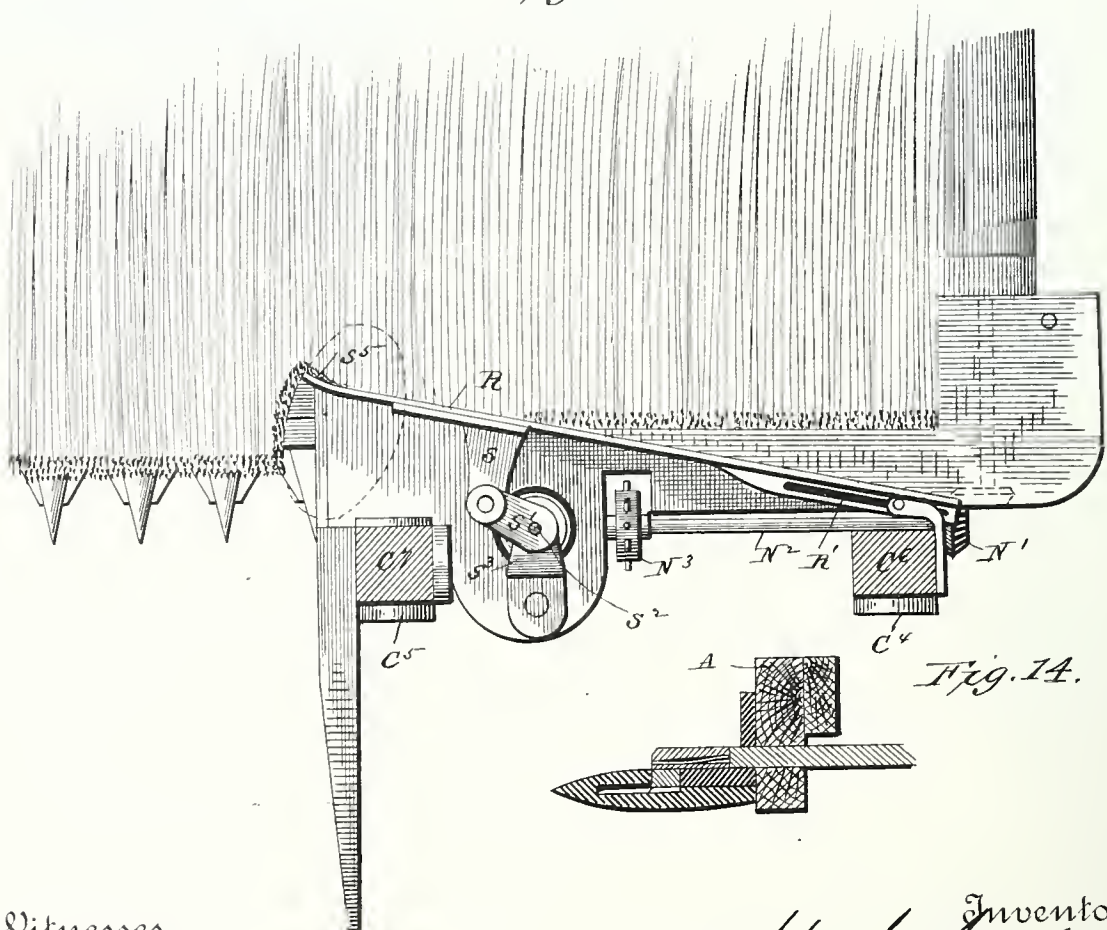


Fig. 13.



Witnesses.

Edwin T. Jewell,
Wm F. Huntmann.

Inventor.

M. L. Nichols.

By his Attorney.

Alex Mahan.

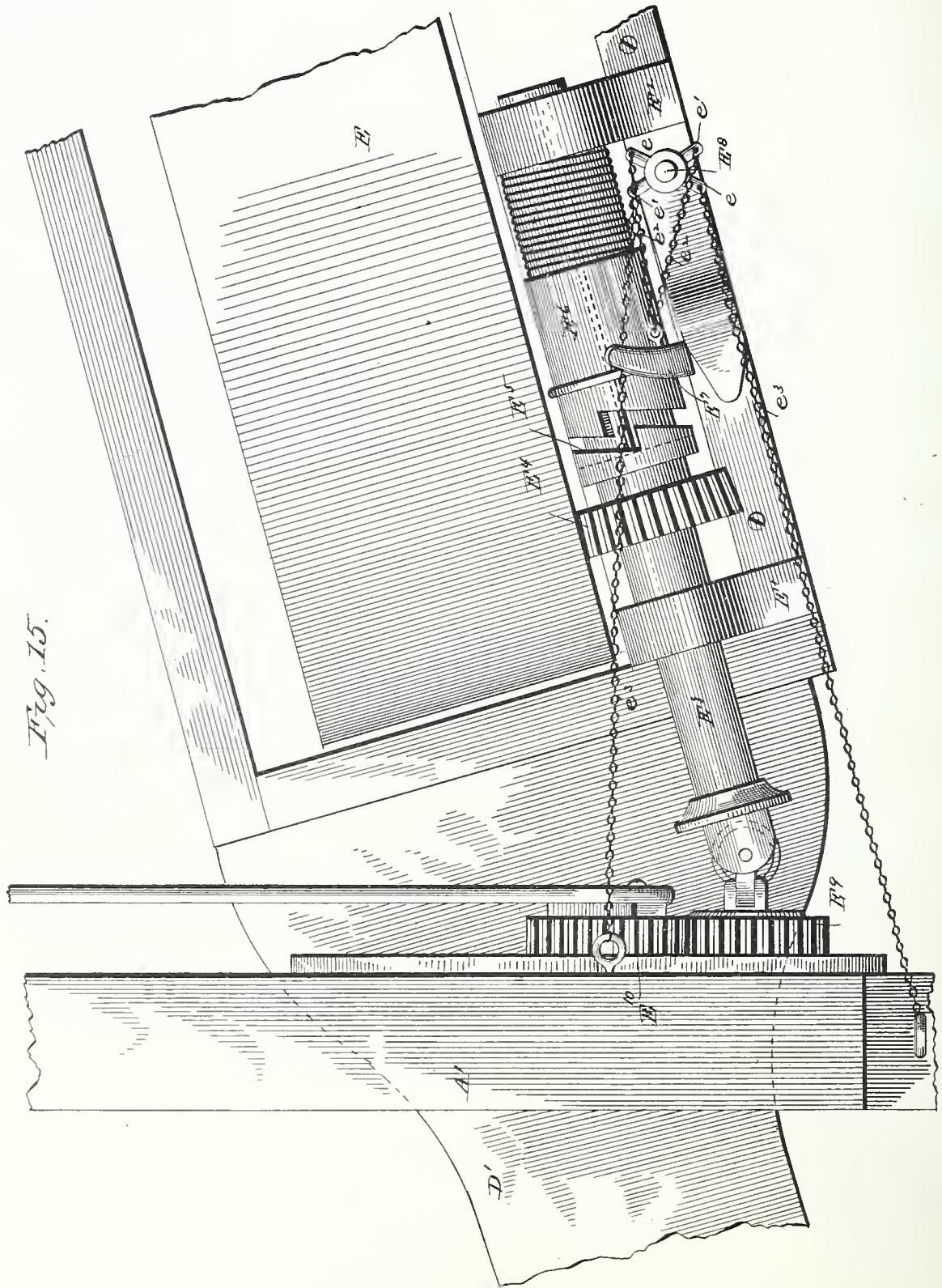
(No Model.)

12 Sheets—Sheet 8.

M. L. NICHOLS.
GRAIN BINDING HARVESTER.

No. 381,080.

Patented Apr. 10, 1888.



Witnesses.

Edwin L. Jewell,
Wm. J. Huntman.

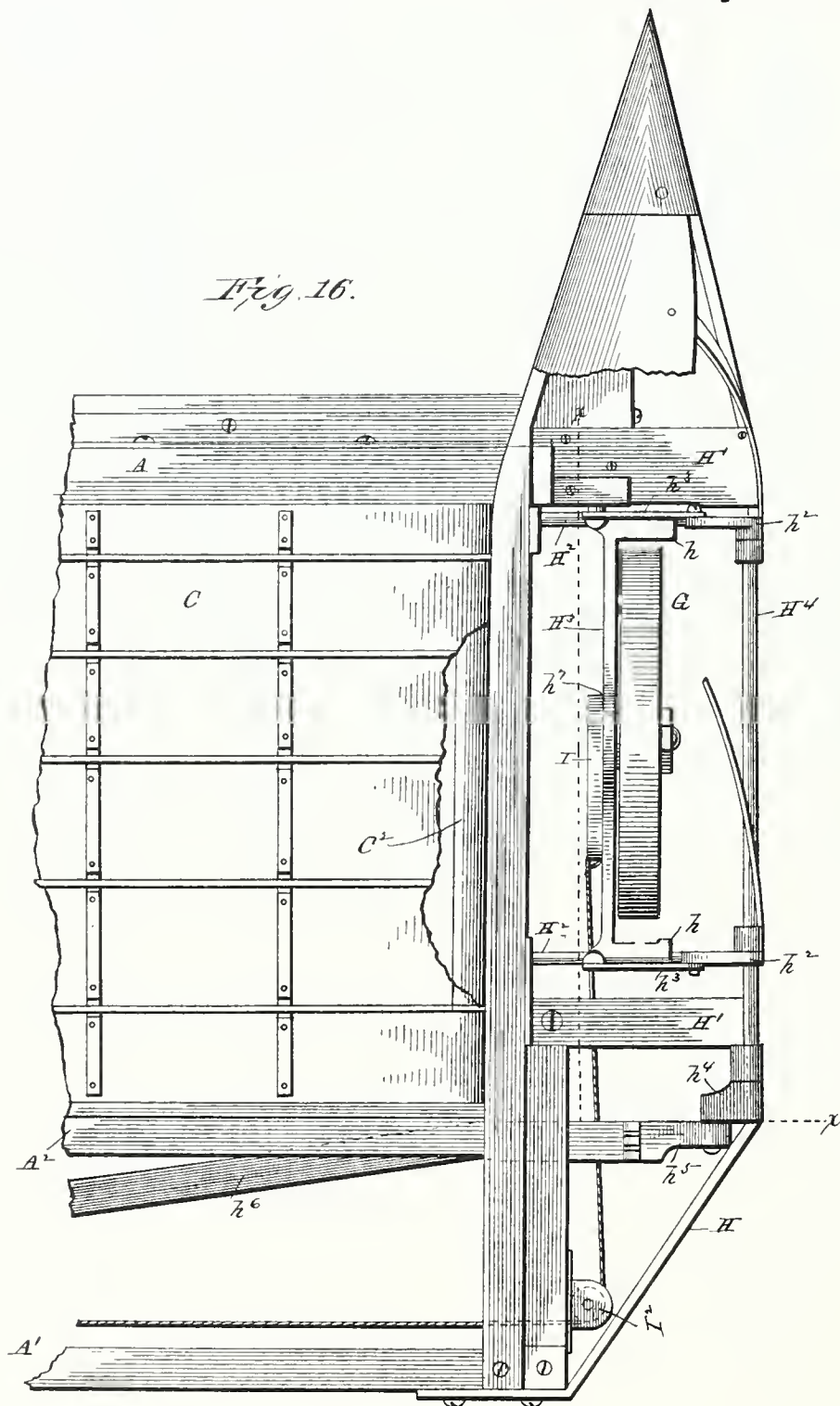
Inventor,
M. L. Nichols.
By his Attorney,
Alex. Mahan

12 Sheets—Sheet 9.

No. 381,080.

Patented Apr. 10, 1888.

Fig. 16.



Edwin I. Yewell,

Wm J. Huntmann

Inventor.

Inventor.
M. L. Nichol.

By his Attorney.

Wm. Mahon.

(No Model.)

12 Sheets—Sheet 10.

M. L. NICHOLS.
GRAIN BINDING HARVESTER.

No. 381,080.

Patented Apr. 10, 1888.

Fig. 17.

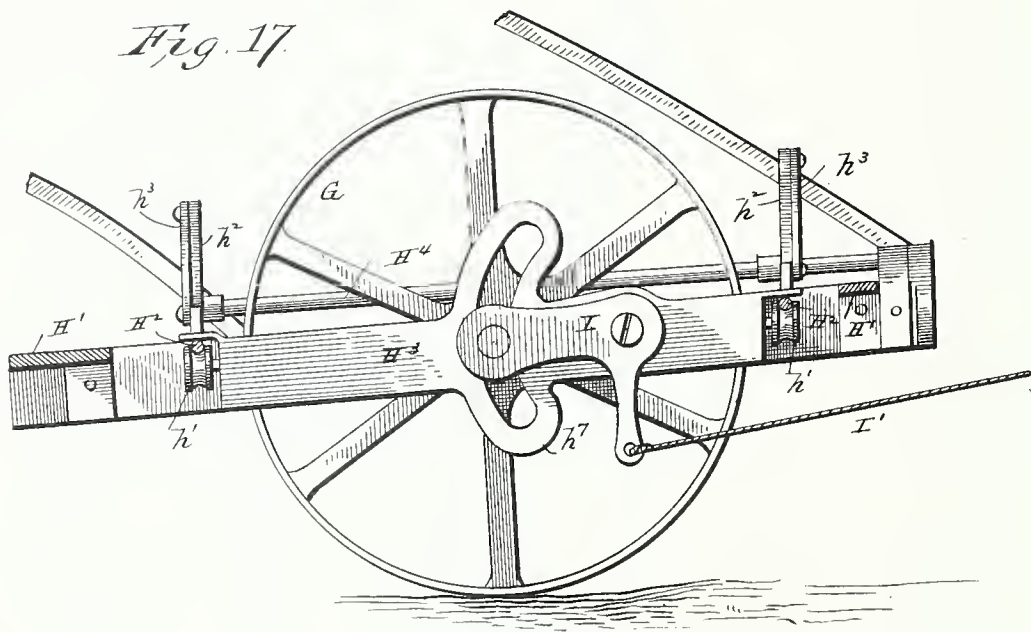
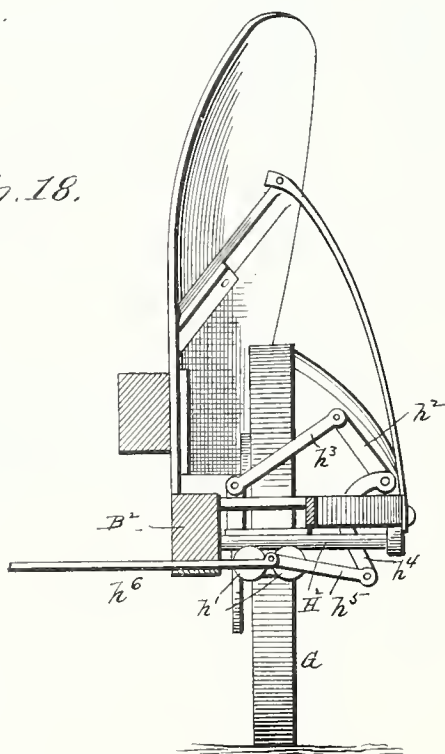


Fig. 18.



Witnesses,
Edwin I. Jewell,
Wm. G. Muntemann

Inventor,
M. L. Nichols.
By his Attorney,
Alex. Mahon.

(No Model.)

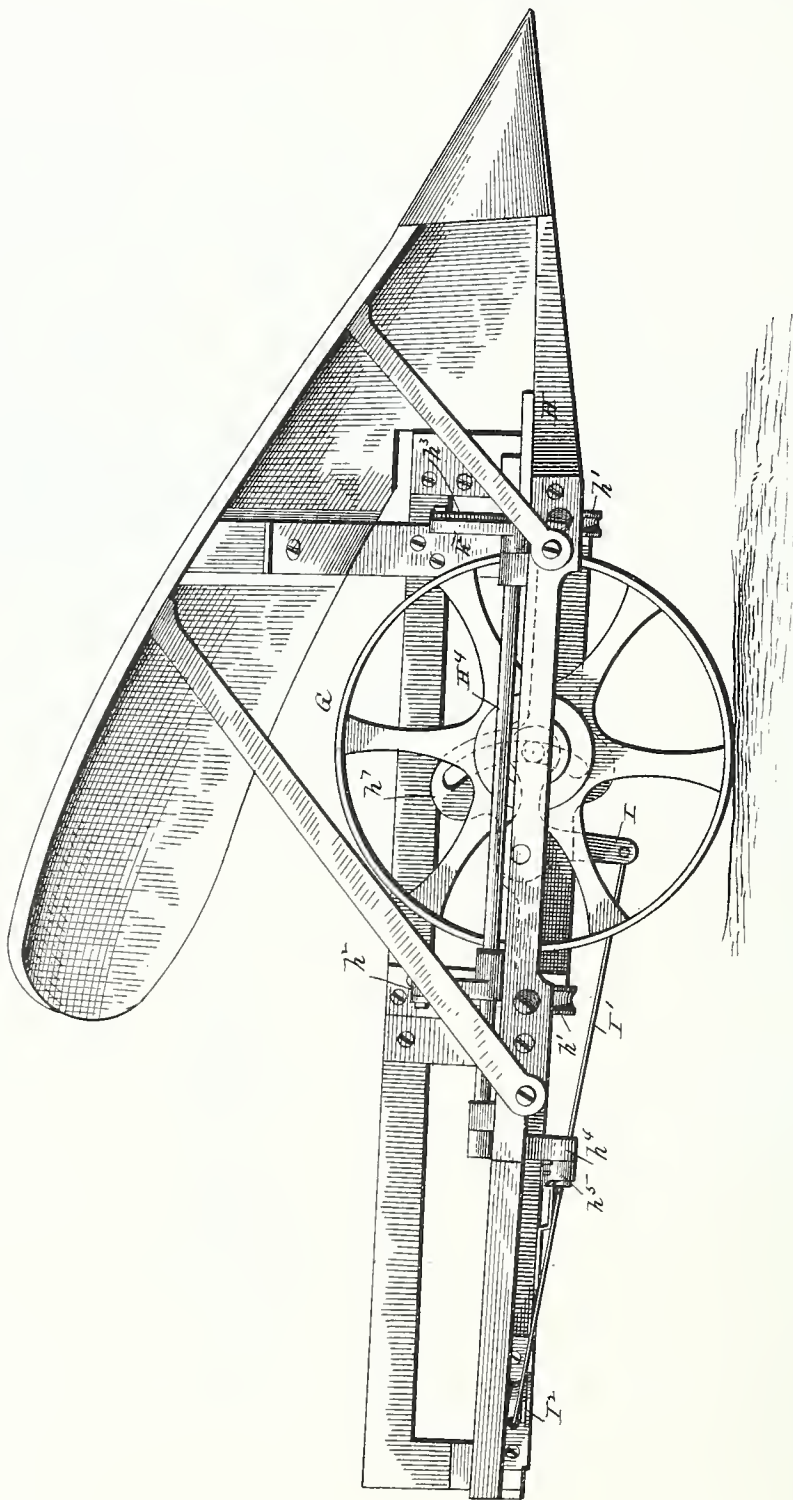
12 Sheets—Sheet 11.

M. L. NICHOLS.
GRAIN BINDING HARVESTER.

No. 381,080.

Patented Apr. 10, 1888.

Fig. 19.



Witnesses
Edw^d T. Jewell,
Jm^s S. Hutchinson.

Inventor,
M. L. Nichols.
By his Attorney,
Alex. Mahon

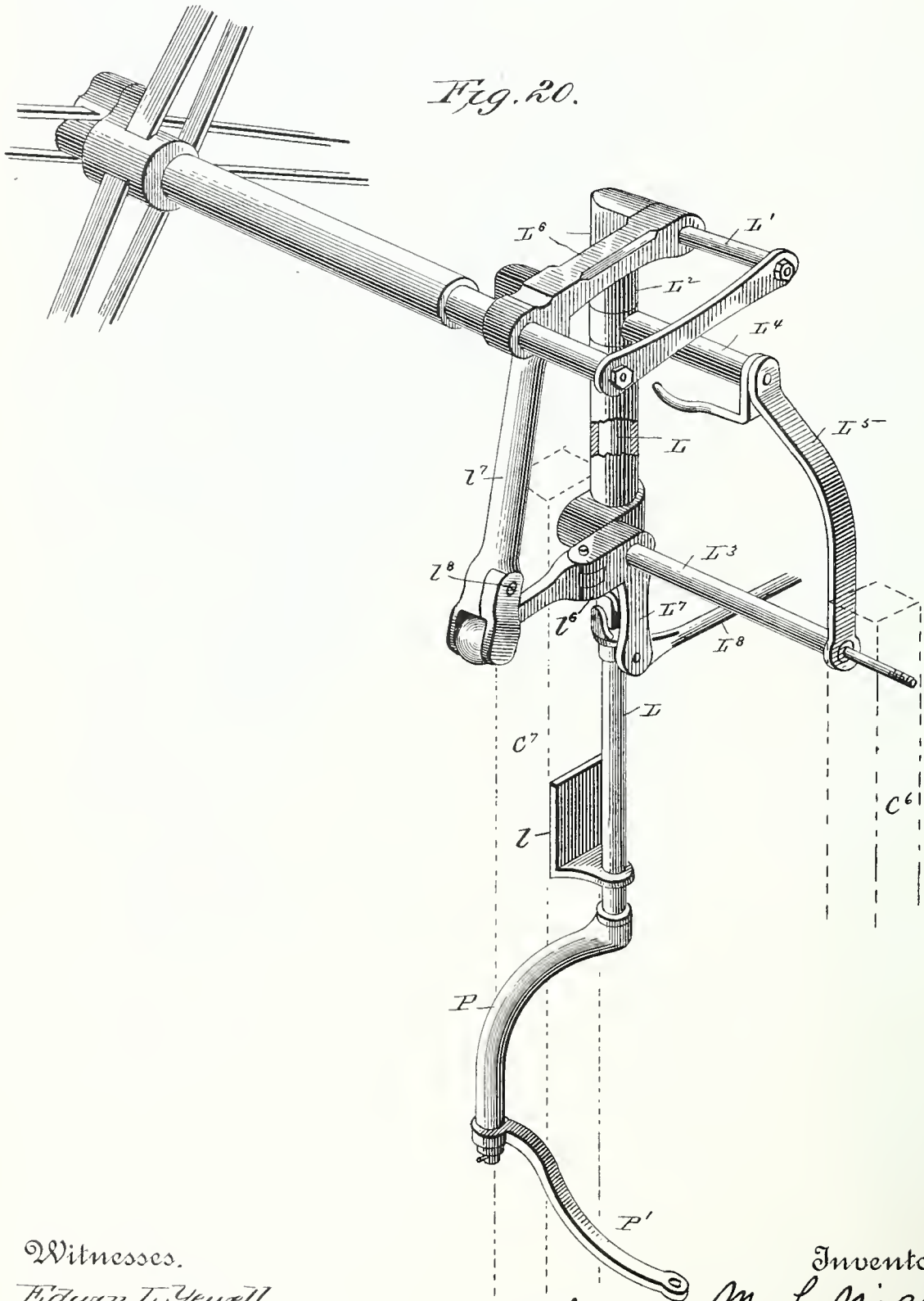
(No Model.)

12 Sheets—Sheet 12.

M. L. NICHOLS.
GRAIN BINDING HARVESTER.

No. 381,080.

Patented Apr. 10, 1888.



Witnesses.

Edwin T. Jewell.

Wm D. Hunter am.

Inventor,

M. L. Nichol.

By *his* Attorney.

Alex Mahon

UNITED STATES PATENT OFFICE.

MARION L. NICHOLS, OF NEW YORK, N. Y., ASSIGNOR TO THE NICHOLS HARVESTER COMPANY, OF SAME PLACE.

GRAIN-BINDING HARVESTER.

SPECIFICATION forming part of Letters Patent No. 381,080, dated April 10, 1888.

Application filed January 11, 1887. Serial No. 324,025. (No model.)

To all whom it may concern:

Be it known that I, MARION L. NICHOLS, of the city, county, and State of New York, have invented certain new and useful Improvements in Grain-Binding Harvesters, of which the following is a full and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to that class of machines particularly applicable for use with automatic binding devices, and in which the grain is delivered to said binding devices on a level, or nearly so, with the cutting apparatus and platform-carrier, and known as "low-down binders," and the parts constituting the machine herein shown and described are designed to operate conjointly to act upon the grain and to adapt the machine to the various conditions incident to the harvest-field, so that the grain shall be properly carried into the cutters, cut, deposited upon the platform, and properly presented to the binding devices to be readily and properly bound thereby, the binding devices forming the subject of a separate application of even date herewith.

The invention consists in a novel manner of mounting the harvester-frame upon two or more wheels, having pivotal connection therewith, to operate conjointly one with the other, whereby the frame may have a lateral motion actuated by and relative to the wheels in turning the machine.

It further consists in supporting the wheels in the frame-bars, having pivotal connections with the main frame, and arranged to engage and be actuated one by the other in the movements of the machine.

It further consists in mounting the harvester-frame between pivoted supporting-wheels, whereby an unobstructed and direct passage for the grain from the carrier to the binding devices is obtained, while providing for the ready turning of the machine and avoiding the dragging of the wheels in the ground and the consequent extra strain upon the team.

It further consists in connecting the tongue with the front supporting-wheel, whereby the swinging movement of the tongue is communicated to the main frame through the frame-bars of the wheels.

It further consists in the combination, with the main supporting-wheel, of an end or grain wheel having a connection therewith, whereby the frame is caused to move endwise relatively to all of said wheels.

It further consists in the combination of the front supporting-wheel, having its supporting-frame pivotally connected with the frame, and an adjustable grain-wheel with devices connected with said wheels and the main frame to raise and lower the frame relatively to said wheel simultaneously and independently of the master-wheel, for raising and lowering the cutters.

It further consists in a novel manner of mounting the outer or grain wheel in the frame and the means for connecting the same thereto.

It further consists in a novel manner of connecting the driving mechanism with the frame, whereby the same is, with the devices to which it communicates motion, thrown out of action automatically in turning the machine.

It further consists in combining the swiveling sleeved reel-post mounted in the main frame with the turning mechanism, whereby the reel is swung out of the way in turning the machine.

It further consists in the combination of the automatically-operated swiveling sleeved reel-post with means for raising and lowering the reel in its various angles of adjustment.

It further consists in the combination of the carrier extending inward beyond the cutters and a vertically-arranged butt-rake located between the cutting apparatus and binding devices, with means arranged adjacent to the cutters for imparting both an endwise and reciprocating motion to the rake to even up the butts and carry the grain toward the binding devices.

It further consists in certain novel features in the construction and arrangement of the several parts, all as hereinafter described.

In the accompanying drawings, Figure 1 is a perspective view of the machine complete, taken from the stubble side, showing the relation of the binding devices thereon. Fig. 2 is a plan or top view of the machine with the reel and binding devices removed. Fig. 3 is

a bottom view showing the rear wheel removed, also showing one manner of connecting the frame-bars of the main supporting-wheels, also one means for connecting the reel-post with the turning mechanism and the means for driving the reel and rake, also showing the outer or grain wheel and one manner of connecting it with the frame-bars of the turning mechanism. Fig. 4 shows a modification in the manner of connecting the frame-bars of the wheels; Fig. 5, a modification in the manner of connecting the swiveling reel-post with the turning mechanism. Fig. 6 is a side view of the master-wheel and frame, showing the clutches and shaft and the automatic shifting mechanism. Fig. 7 is a section through a portion of the frame, showing the manner of mounting and controlling the reel, also the manner of driving the same. Figs. 8, 9, and 10 are detached views of the reel-post and sleeve. Fig. 11 is a side view of the front supporting-wheel, showing the manner of connecting it with the frame and the means for changing the relation of the frame thereto for raising and lowering the cutters. Fig. 12 is a perspective view of the rake and the means for reciprocating and giving endwise movement to the same. Fig. 13 is a plan or top view of a portion of the cutting apparatus and carrier, showing the relation of the rake thereto, also showing by dotted lines the path of movement of the rake. Fig. 14 is a section through the front sill of the machine, showing one of the guard-fingers and a section of knife. Fig. 15 is a plan view of a portion of the master-wheel and its supporting-frame, showing the manner of communicating motion therefrom to the operating parts of the machine and the means whereby the driving mechanism is thrown automatically into and out of action. Fig. 16 is a top view of the outer end of the platform, showing the arrangement of the outer or grain wheel. Fig. 17 is a section of the outer end of the frame, taken through the line $x x$, Fig. 16, showing the manner of connecting the grain-wheel-supporting frame with the machine and the manner of supporting the wheel therein. Fig. 18 is a section through the rear end of the grain-wheel-supporting frame, and Fig. 19 is an end view showing the wheel and its connections complete. Fig. 20 is a detached perspective view of the reel-post and attachments with sprocket-wheels removed.

The main frame is made in rectangular form, and consists of the front and rear sills or bars, $A A'$, inner cross-bars, $B B'$, and an outer cross-bar, B^2 . The distance between the front and rear sills, $A A'$, is made wider than the apron or carrier, and behind the carrier or apron is arranged a bar, A^2 , connected at the outer end to the cross-bar B^2 and at the inner end to a cross bar, B^3 . The carrier or apron C extends from the outer or grain side of the machine past the inner end of the cutting apparatus, passing around and being supported by rollers $C' C^2$, one located near the grain-wheel and the other between the cross-bars B'

B^3 , so that the apron shall pass around the bar B^3 and move in near relation to the outer face of the bar B' , the binder-frame being located upon the bars $B B'$, so that the grain deposited upon the apron or carrier in the rear of the cutting apparatus shall be carried by the same into position to be acted upon by the binding devices, the space behind the apron and between the bar A^2 and rear sill, A' , being closed by a plank or covering, A^3 .

An angle bar or iron, A^4 , is bolted to the forward frame-bar, A , and extends from end to end of the same, to which the guard-fingers are bolted, and which bar or iron forms a support or bearing for parts of the mechanism, hereinafter referred to, located between the inner shoe and the binder-frame.

In suitable angle-plates, $C^4 C^5$, connected to the front sill and angle-bar, are supported upright posts $C^6 C^7$, one located adjacent to the inner shoe and the other adjacent to the frame bar or timber B' , said posts being connected near their upper ends by a cross-bar, C^8 . Similar posts, $C^9 C^{10}$, are connected to the rear sill, A' , in line with the front posts, being similarly connected near their upper ends by a cross-bar, C^{11} . The frame thus constructed is mounted upon bars or supports $D D'$, which have vertically-arranged pivotal connections $d d'$ therewith, the rear bar, D' , extending out behind the main frame and supporting the rectangular frame for the master-wheel E , which is rigidly secured thereto. The front support or bar, D , extends out beyond the main frame, and has formed near its outer end lugs or ears d^2 , through which the frame F , for the front supporting-wheel, F' , is connected by a rod or shaft, d^3 . This frame is composed of two arms rigidly connected to the axle of the wheel, one upon each side thereof, and extending back beyond their points of connection with the bar D' , and being in turn connected by a yoke or bail, F^3 , hereinafter referred to.

The supports or bars $D D'$ are shown as extending inward beyond their pivotal connection and into engagement with each other, and the bar D' provided with a slotted end, d^4 , a portion being made straight and with a curved end, and the arm D as provided with a projecting pin, d^5 , engaging and adapted to move in said slot, the construction and arrangement being such that in turning the front wheel to turn the machine the pin on said arm will be caused to move through the slot and turn or move the bar D' on its pivot, and the rear wheel to be turned to an opposite inclination, or into proper position to follow in the curved path, or nearly so, of the front wheel, this movement causing the frame to change its relation endwise to the supporting-bars, so that the machine may readily turn the curves, permitting the front wheel to be turned at a greater angle than the rear wheel to facilitate the turning of the machine within a narrow space.

A modification in the manner of engaging

the two bars is shown in Fig. 4, in which segmental toothed faces formed on the end of each bar to engage each other, and which construction operates, as will be readily seen, in a similar manner to that shown in Fig. 3.

The outer grain-wheel, G, is supported in suitable bearings at the end of the machine in the following manner: A frame or bar, H, is bolted to the rear sill, and extends out therefrom at an angle of about forty-five degrees, more or less, to about in line with the frame-bar A², from which point it extends forward parallel with the cross-bar B² to a point about on a line with the front sill, A, where it is bent inward at about the same angle with its rear end to form a support for the divider point. This frame-bar is supported between its two ends by cross rods or bars H', secured to it and to the cross-bar B² of the frame. Between these bars and secured in a similar manner are arranged rods H², forming tracks or guideways, hereinafter referred to. A frame, H³, has its ends h bent at right angles to its face, and in which ends are mounted friction-wheels h', having their peripheral faces formed to fit and engage the rods H².

A rock-shaft, H⁴, mounted in suitable bearings formed with or secured to the frame H, has connected to it near each end a rod or link, h², which are in turn connected with links h³, secured to lugs formed or attached to the frame H³. At the inner end of the rock-shaft H⁴ is rigidly secured a bent depending arm, h⁴, having a link, h⁵, connected therewith, which is in turn connected with a rod, h⁶, mounted in suitable guideways in the frame, and which rod extends from its point of connection with the link h⁵ to and is connected with the wheel-supporting bar D', for a purpose hereinafter explained.

The frame H³ is provided centrally of its length with a curved slotted portion, h¹, through which the axle of the wheel G passes, the wheel being mounted upon an axle formed with or projecting from the face of one end of a bell-crank lever, I, pivoted in the frame H³, the other arm extending down from the pivotal point, and has connected to it a cord or chain, I', which passes back and around a pulley, I², mounted in the bar B², thence longitudinally of the frame over a pulley, I³, up over a pulley, I⁴, and thence forward and is connected to a shaft, I⁵, mounted in bearings in the post C⁶. This shaft extends through the post, and has mounted upon its opposite end a toothed wheel, I⁸, which engages with a worm-gear, I⁹, on the end of a shaft, K, supported in bearings secured to the front post, C⁶, and the rear post, C⁹, the shaft at its rear end being provided with a crank or handle, K', within convenient reach of the driver.

The bail F³, connecting the arm forming the frame or support for the front supporting-wheel before referred to, has connected to it a chain, F⁴, which passes thence over a pulley, F⁵, mounted in bearings projecting from the face of the post

C⁶, the pulley being in front of and in line with the portion of the shaft I⁵ extending through the post before referred to, the chain F⁴ passing over the pulley and being connected to the shaft, the post being cut out at this point to give sufficient room on the shaft to permit the winding of the chain thereon.

From the foregoing it will be seen that, the front and end or grain wheel having pivotal connections with the frame and being suspended and controlled from and by the same operating mechanism, the relation of the frame to both to raise and lower the cutters may be simultaneously changed by the driver, the means being positive in their action, and can be accomplished with little exertion on the part of the driver, and being held at any point in the range of movement positively and without the intervention of any stops or holding devices.

The rod h⁶, which is connected with the depending arm on the rock-shaft H⁴, which controls the movement of the frame endwise relatively to the grain-wheel, as before stated, is connected with the wheel-supporting bar D', and consequently any movement of the frame endwise caused by the movement of said wheel-supporting bars in the turning of the machine will permit the frame to also move relatively to said grain-wheel, and consequently further facilitate the ease with which it may be turned, preventing any dragging of the grain-wheel consequent to the necessity for end movement in turning, which would be the case if the wheel was rigidly fixed to the frame.

The rod h⁶, while being shown and described as being connected with the supporting-bar D', may, if preferred, be connected with the bar D or with the tongue, as shall be found desirable as occasion shall require.

The master-wheel E, as before stated, is supported in a rectangular frame rigidly secured to the frame-bar D', and one of the side timbers of the frame has mounted upon it bearings E' E² for the shaft E³, through which motion is communicated from the master-wheel to the various parts of the machinery. This shaft has loosely mounted upon it, between the bearings, a pinion, E⁴, having a clutch-face, E⁵, upon the hub thereof, and has also mounted upon it a key-seated sleeve, E⁶, with a corresponding clutch-face to engage the clutch-face on the hub of the pinion, being held engaged therewith by means of a spirally-wound spring located upon the shaft between the end of the sleeve and the bearing E², and being held out of engagement therewith by means of an arm or lever, E⁷, connected to said sleeve and to the frame. Upon the frame, adjacent to the bearing E², is located a post, E⁸, upon which are mounted two independently-operating swiveling or oscillating levers, e e', one arm of each of which is connected by a short chain, e², with the lever E⁷, and the other arm of each lever being connected by a chain, e³, with the

frame of the machine, and at such a point at either side of the pivotal center on which the master-wheel swings as to act upon the lever to throw the clutch-sleeve out of engagement with the pinion-clutch during the latter part of the action of the wheel in turning the machine.

While in practice the means herein described for connecting the clutch mechanism with the frame has been found the most simple and convenient, still it will be readily seen that other means than those described may be employed without involving other than mechanical skill to suggest them.

The shaft E^9 is connected to a shaft mounted in the frame through a universal-joint connection, which shaft carries on its end a pinion, E^9 , which in turn engages and communicates motion to a pinion, E^{10} , on the end of the roller-shaft C' , from which motion is communicated to the various parts of the machine. This pinion is also provided with a wrist-pin, to which the pitman for driving the cutters is connected.

The reel-post consists of a shaft, L , in two parts, connected by a universal joint having an arm, L' , at its upper end, extending at right angles therefrom, and a sleeved portion, L^2 , surrounding the upper section of the shaft.

The lower portion of the shaft is mounted in bearings I , secured to the post C^7 , and the sleeve is connected at its lower end or base through a lug or ear to a shaft, L^3 , extending between the posts C^6 C^7 , and is supported at its upper end by a projecting arm, L^4 , parallel with the shaft L^3 , being connected with said shaft through a bent arm, L^5 . The reel-shaft is connected to the upper end of the post from the arm L' by a link, L^6 , and in such manner as to move upon said arm as a pivot.

Upon the shaft L^3 is mounted a bell-crank lever, L^7 , the outer end of the projecting arm L^6 of which is hinged or jointed, and has its end made in spherical form and secured to a divided link-arm, L^7 , having semi-spherical recesses in each portion to embrace the end of the arm L^6 , the two parts of the link being held together and to the arm L^6 by a screw or bolt, L^8 , the upper end of the link L^7 being connected to the link L^6 through a lug, L^9 , projecting therefrom. The outer arm of the bell-crank lever L^7 is connected to a rod, L^8 , which in turn is connected with a quadrant-lever mounted on the cross-bar C^{11} , which lever is provided with a suitable spring-latch to engage the notches in the quadrant-rack, and by means of which connections the reel may be adjusted up and down. On the sleeved portion, at right angles to the arm L^4 , is arranged a lug, L^{10} , to which a link, L^{10} , is connected, and which link at its rear end is in turn connected with a divided band, C^{12} , embracing a bar, C^{13} , extending from front to rear of the frame. The bar is bored out longitudinally and is provided with a central transverse longitudinal slot, M , and in the bar, in suitable

bearings, is mounted a shaft, M' , which is provided on that part passing through the slot with a worm or screw-thread, m' , and which portion engages a nut held between the divided band, by means of which the band is caused to move on the bar and to rock the reel-post on the shaft L^3 and move the reel to or from the cutters, the shaft M' being provided on its rear end, adjacent to the driver's seat, with a crank, M^2 , for turning said shaft.

A miter-pinion, N , on the end of the roller-shaft engages a similar pinion, N' , on a shaft, N^2 , parallel with the cutters, communicates motion to a sprocket-wheel, N^3 , and from which motion is communicated to the larger wheel of a double sprocket, N^4 , on the shaft L^3 . A sprocket-chain running from the smaller wheel of the sprocket N^4 communicates motion to another double sprocket, N^5 , on the shaft L' , and from the smaller one motion is communicated to a sprocket-wheel, N^6 , on the reel-shaft. The lower end of the shaft L of the reel-post has rigidly attached to it a bent arm, P , extending outward and downward therefrom, and which arm is connected to the wheel-supporting bar D through a link, P' . By this means of connecting the reel-post with the turning mechanism it will be seen that a pivoted front supporting-wheel with the tongue attached may be used with a harvester, as the reel will be automatically turned out of the way of the team in turning the machine. The universal joint in the shaft, the hinged arm, and the ball-and socket joint of the bell-crank lever and the sleeve connection heretofore described permit the reel to be adjusted to pick up lodged or fallen grain, or for other purposes, under any of the various angles of relation of the reel to the machine, without strain or friction on the parts.

A butt rake, R , is mounted in a suitable bearing-plate secured to the frame-timber A in rear of the posts C^6 C^7 . This rake consists of a board arranged vertically upon one edge, and made of such length as to operate between the inner edge of the cutting apparatus and the point at which the grain is taken by the binding mechanism. This board is provided on its rear side with slotted guideways R' , one near each edge, through which a rod mounted in a suitable bearing, R^2 , secured to the post C^6 , passes, and which rod, while forming a pivotal connection for the inner end of the rake, permits said rake to reciprocate endwise. Near the forward end of the rake is formed or attached a lug, S , which is connected with an arm, S' , of a revolving shaft, S^2 , mounted in a support, S^3 , secured to the bearing-plate. The bearing-plate at this point extends outward and is provided with a circular opening to receive a pinion connected to the end of the shaft S^2 , and which pinion engages with and is driven from a pinion, S^4 , mounted on the shaft N^2 , which communicates motion to the reel through the sprocket-wheel and pinion heretofore described. The rake is provided with

suitable curved fingers, S⁵, on the end thereof adjacent to the cutters, to facilitate the handling of the grain. By this construction and manner of operating the rake it will be seen
 5 that the rake has both a lateral and swinging motion imparted thereto, and moves at its governing end in an elliptical path or orbit, acting upon the grain to force it toward and with the carrier, and, by extending between the cutting
 10 apparatus and binding devices, serves as a guide to direct the grain from the cutters to said devices.

Having now described my invention, I claim—

15 1. A harvester-frame, in combination with two or more supporting-wheels having pivotal connections with the frame and means for connecting them together intermediate of their pivotal connections, substantially as described,
 20 whereby the main frame is caused to have a lateral motion relative to the ground actuated by the wheels in turning the machine.

2. The combination of the main frame with the divided supporting-frame carrying the
 25 wheels at its outer ends and having pivotal connections with the main frame at points between the wheels and its point of division, and means for causing the parts of the frame to be actuated, one by the other, in the movement
 30 of the wheels in turning the machine, substantially as described.

3. The combination of the binder-frame, a main supporting-wheel arranged in rear thereof and having a pivotal connection therewith,
 35 a front supporting-wheel, also having a pivotal connection with the frame, a tongue connected to the wheel-frame, and means for connecting the wheel-frames intermediate of their pivotal connections, so as to move in unison,
 40 substantially as described, whereby the swinging of the tongue will cause the rear wheel to be turned at an opposite inclination to the front wheel and the frame to have a lateral motion relative to the ground, as set forth.

45 4. The combination, with the front and rear supporting-wheels having the carrier and binding devices located between the same, of an end wheel located at the grain side of the machine and having its frame supported at
 50 front and rear, substantially as described, whereby the main frame may move endwise in relation to said end wheel in turning the machine.

55 5. The combination of the front and rear supporting-wheels connected by means of the pivoted arms, the end or grain wheel connected to one of the arms of said supporting-wheels, and the main frame supported by the wheels, substantially as described, whereby the main
 60 frame is caused to move endwise in turning the machine, as and for the purpose set forth.

65 6. The combination of the harvester-frame, an outer or grain wheel supported in guideways, and the arms or levers connecting the grain-wheel with the turning mechanism, substantially as and for the purpose set forth.

7. The combination of the harvester-frame, an outer or grain wheel having its frame supported at front and rear in guideways in the harvester-frame, and means, substantially as
 70 described, for connecting the grain-wheel with the turning mechanism.

8. The combination of the harvester-frame, an outer or grain wheel supported in guideways, the rock-shaft in the harvester-frame,
 75 the arms or levers for connecting the rock-shaft with the grain-wheel frame, and means, substantially as described, for connecting the rock-shaft with the turning mechanism, as and for the purpose set forth.

9. The combination of the slotted supporting-frame for the grain-wheel, mounted on tracks or guideways and connected through mechanism with the pivoted supporting-wheels, the bell-crank lever pivoted to the
 85 supporting-frame and carrying at one end the grain-wheel, and means, substantially as described, connected to the other end of said lever for raising and lowering the grain-wheel, all substantially as set forth.

10. The combination of the cutting and grain delivering and binding devices described, and means for operating the same, with the automatic clutch mechanism acting to throw the
 90 same into and out of action in turning the machine, and a lever or shifting device for throwing the mechanism into and out of action by hand, substantially as set forth.

11. The combination of the main frame with the divided supporting-frame carrying the
 100 wheels at its outer ends and having pivotal connections with the main frame at points between the wheels and its points of division, a driving and driven mechanism, and an automatic and hand-operating clutch, substantially
 105 as described, whereby in turning the machine the driven mechanism may be thrown automatically out of action or may be thrown out by hand, as set forth.

12. The swiveling reel-post, combined with
 110 means, substantially as described, for automatically acting upon the reel to turn it in turning the machine, as and for the purpose set forth.

13. The combination of the harvester-frame,
 115 a pivoted wheel-supporting frame, a swiveling reel-post, and means, substantially as described, for connecting the reel-post with the wheel-supporting frame, as and for the purpose set forth.

14. The combination, with the front and rear supporting-wheels connected by the pivoted arms, of the swiveling reel-post connected with the arm of one of the supporting-wheels,
 120 substantially as described, whereby the reel is caused to be moved automatically out of the way of the team in turning the machine, as set forth.

15. A swiveling reel-post carrying the reel, combined with the machine to move said reel
 130 to and from the cutters automatically in turning the same, and means, substantially as de-

scribed, whereby the reel can be raised and lowered in its various angles of relation to the machine, as and for the purpose set forth.

5 16. The combination of the carrier extending in beyond the cutters, the binding devices located at the inner end thereof, a vertically-arranged butt-rake pivoted near the inner end of the carrier and extending to the cutters,

and means, substantially as described, arranged adjacent to the cutters, for imparting to both an endwise and reciprocating motion to the rake, as set forth.

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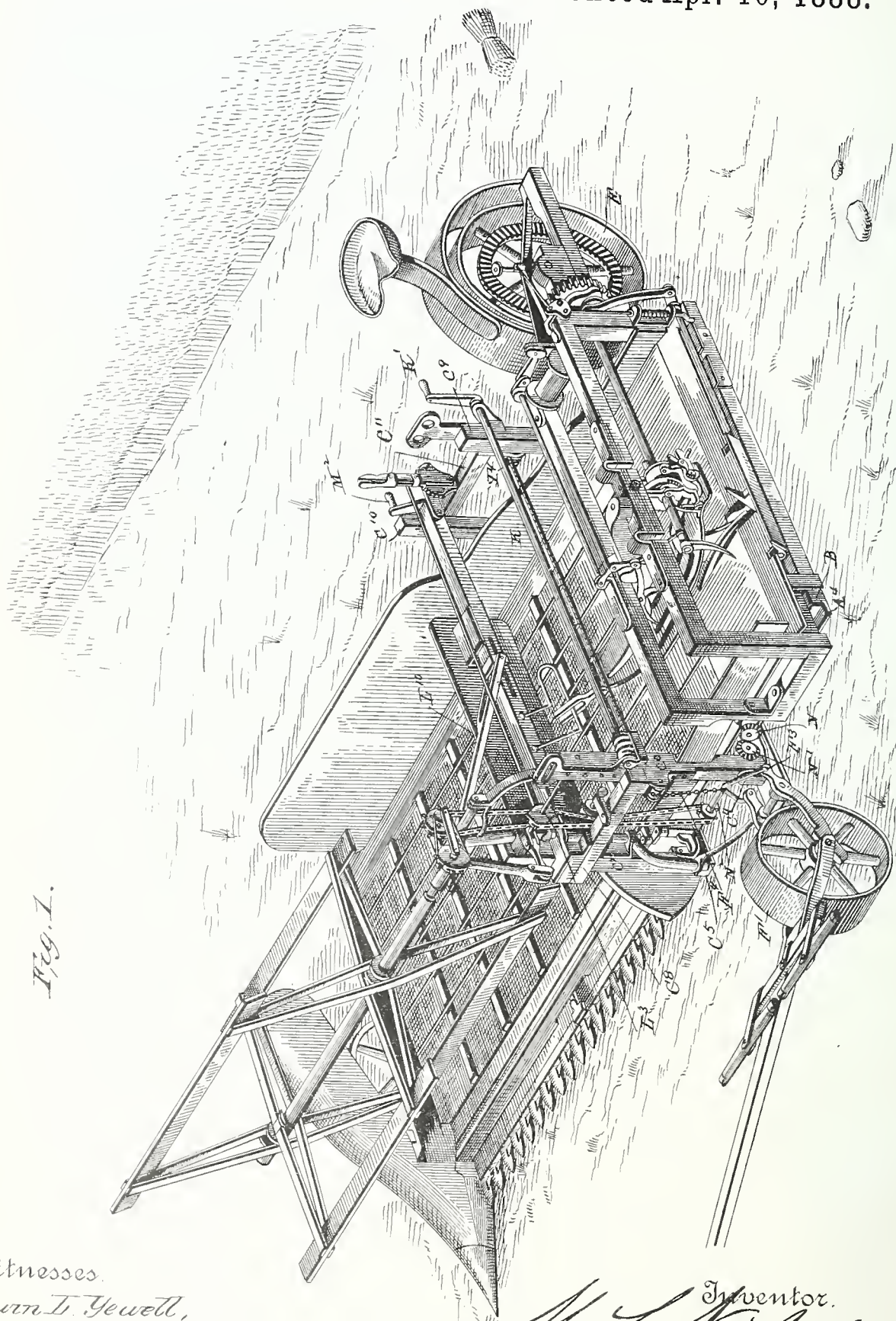
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12 Sheets—Sheet 1.

M. L. NICHOLS.
GRAIN BINDING HARVESTER.

No. 381,080.

Patented Apr. 10, 1888.



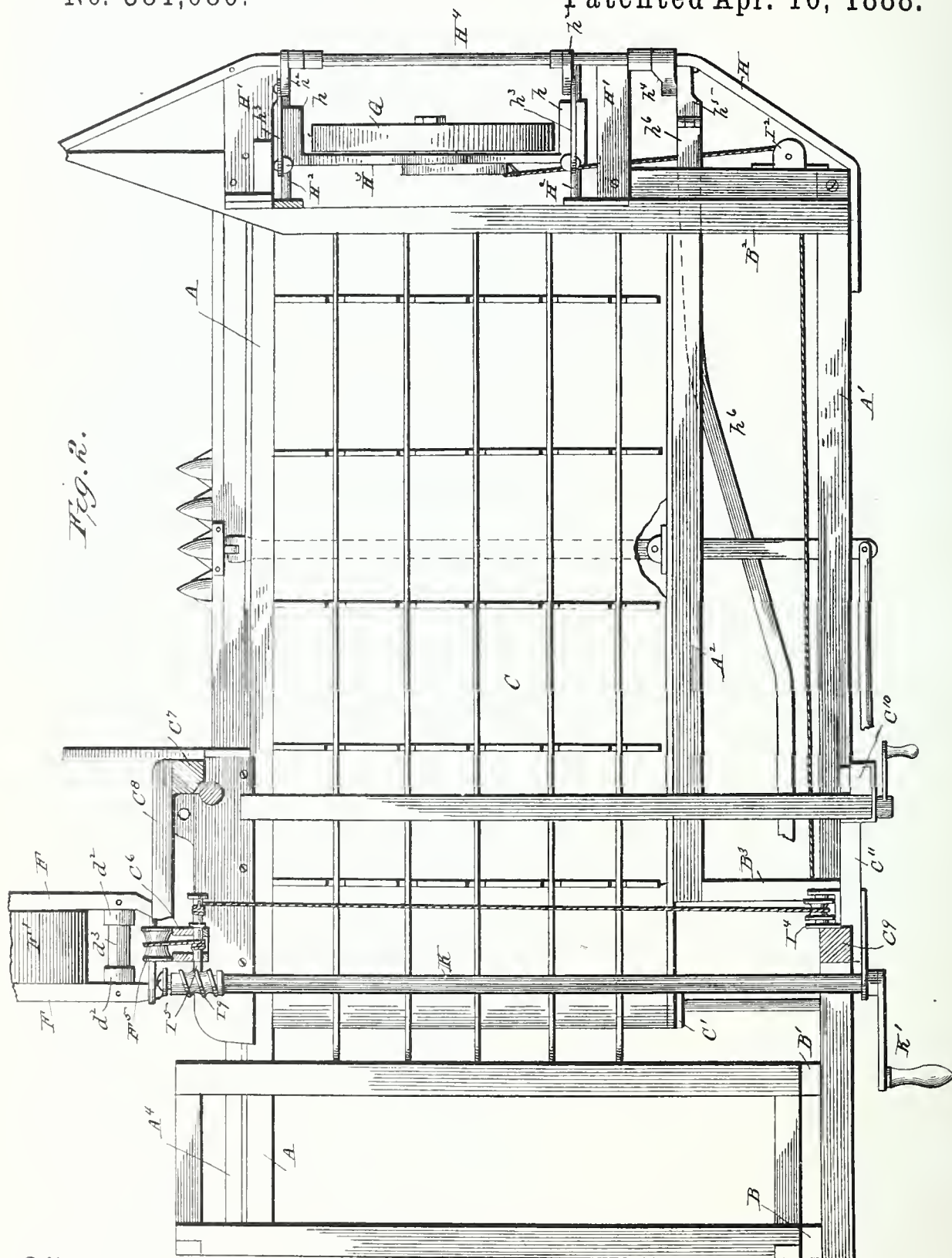
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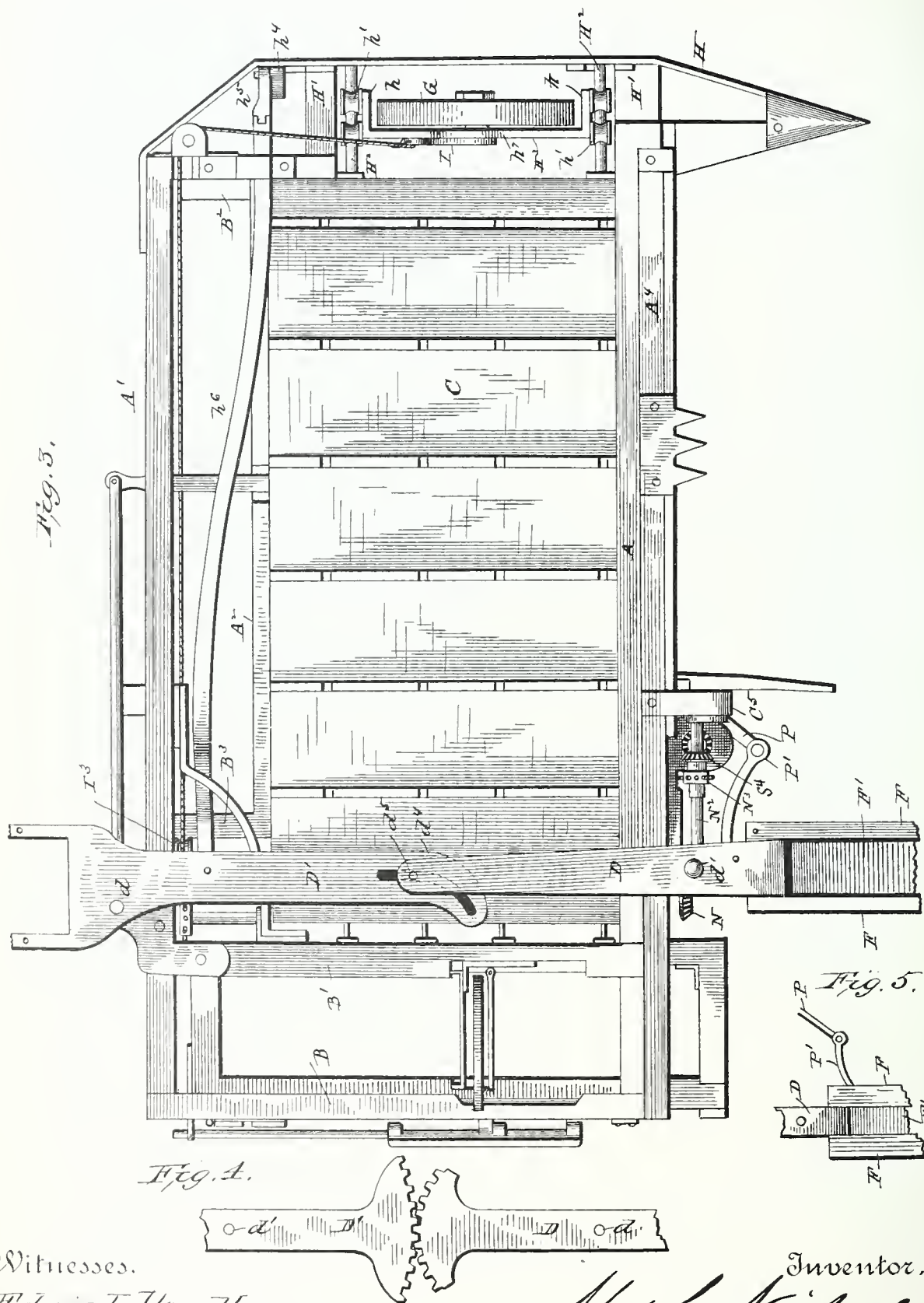
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12 Sheets—Sheet 4.

M. L. NICHOLS.
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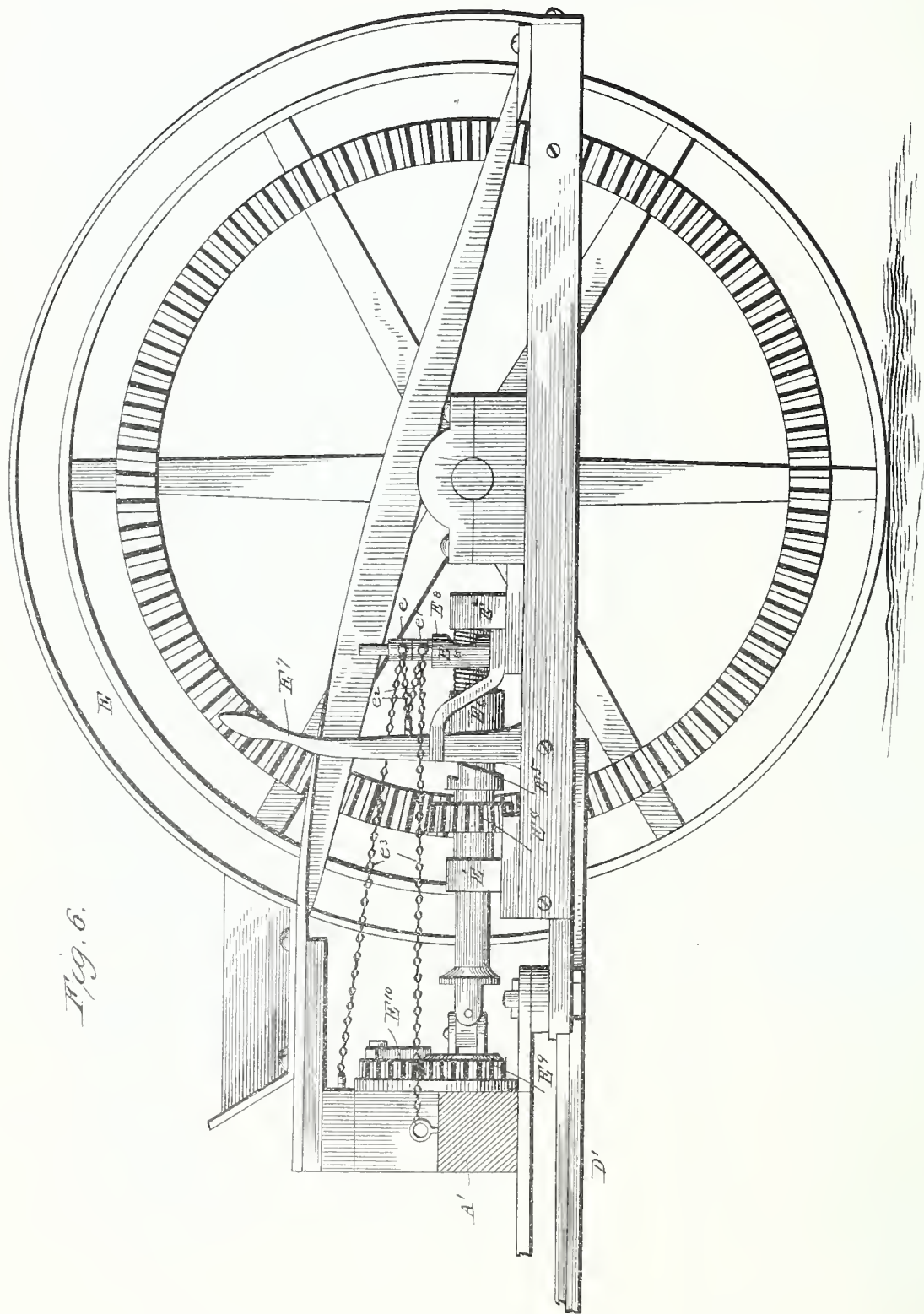


Fig. 6.

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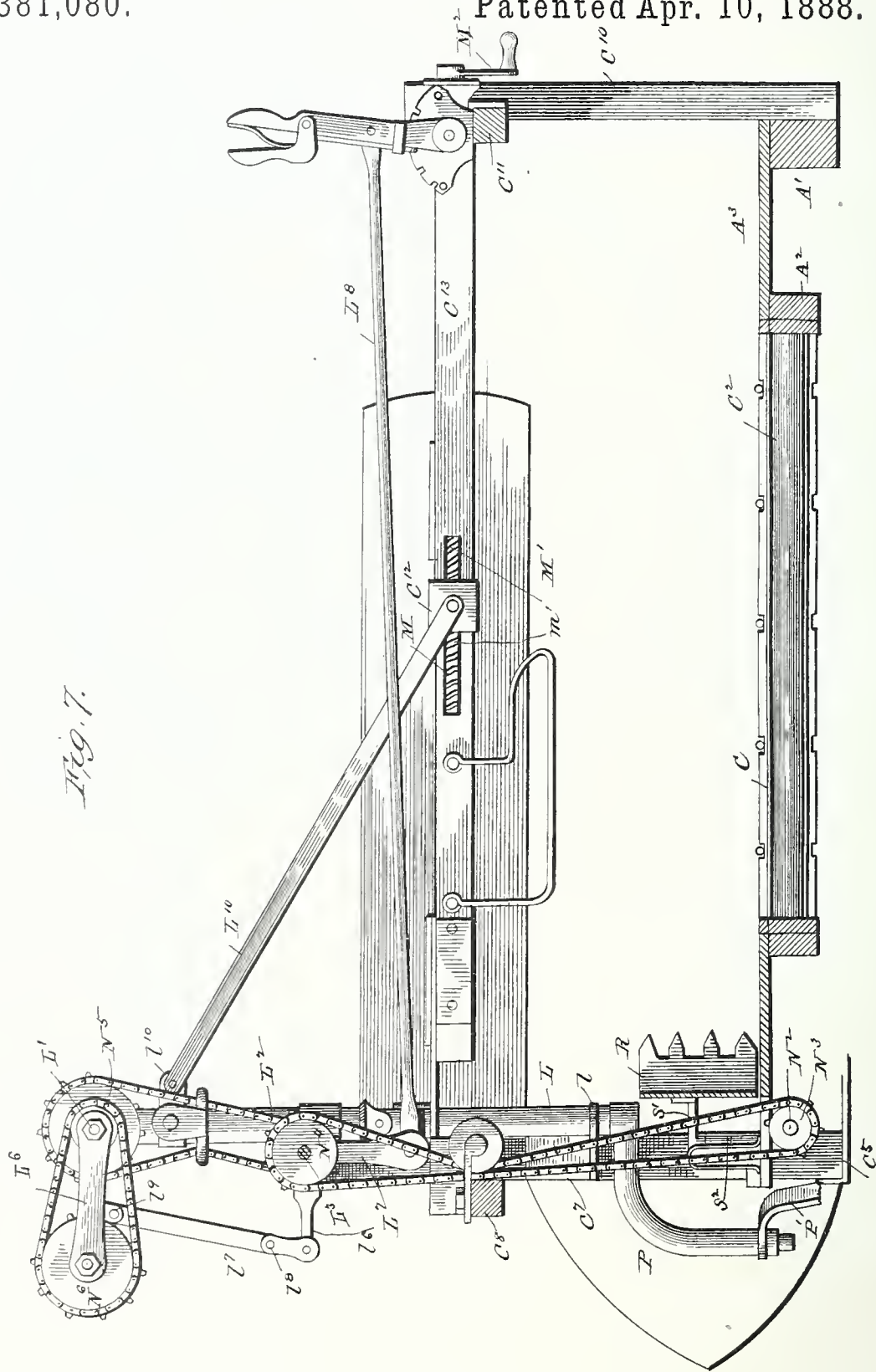
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M. L. NICHOLS.
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No. 381,080.

Patented Apr. 10, 1888.



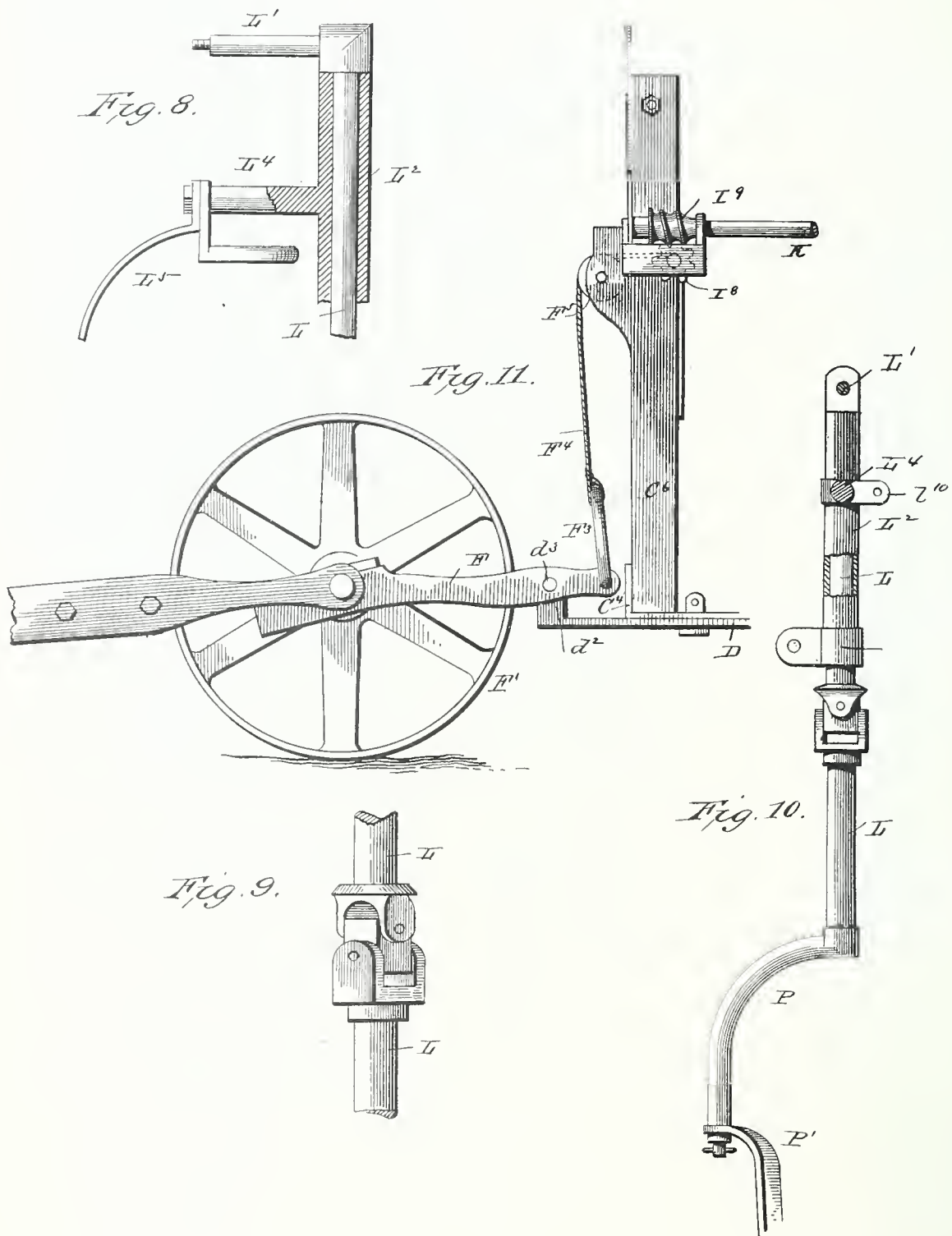
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12 Sheets—Sheet 7.

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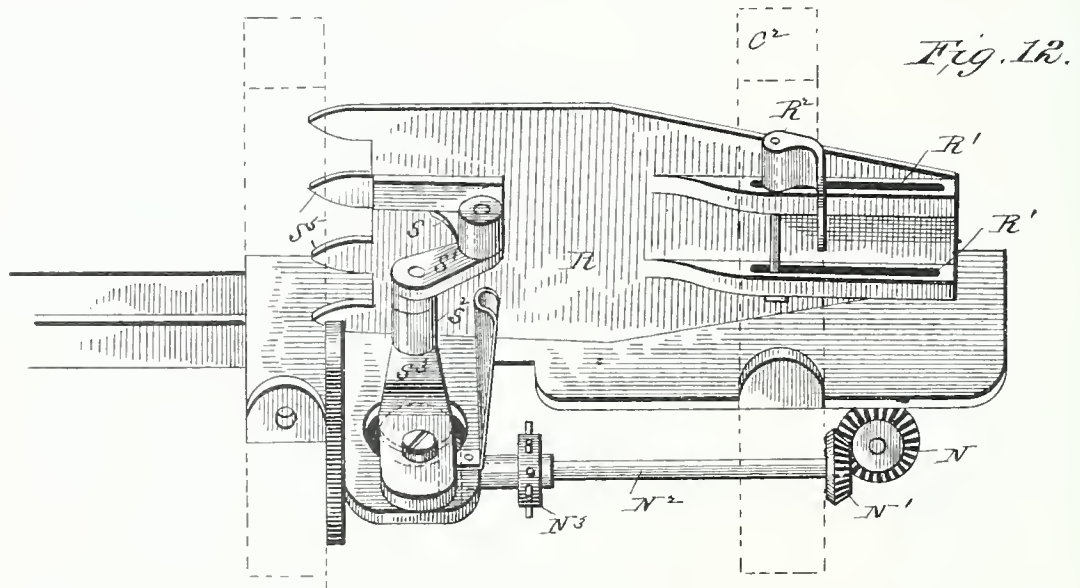


Fig. 13.

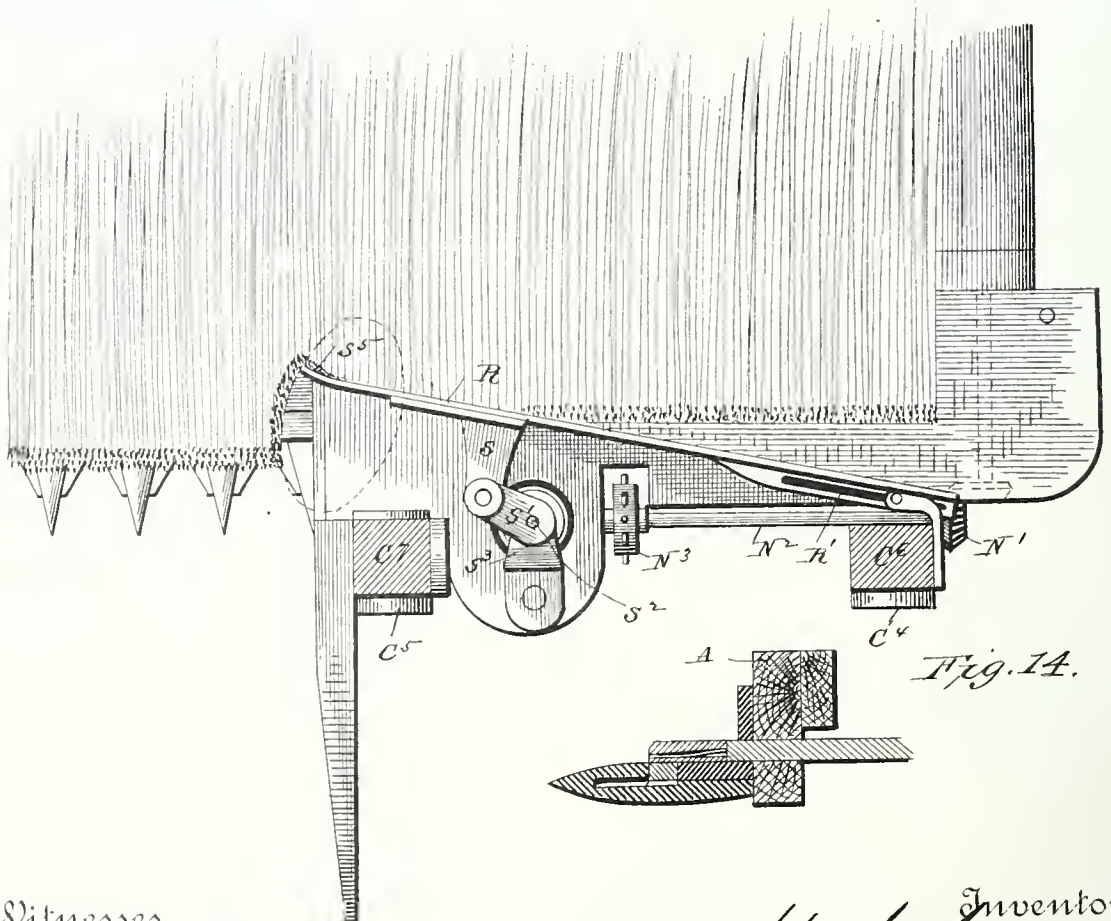


Fig. 14.

Witnesses.
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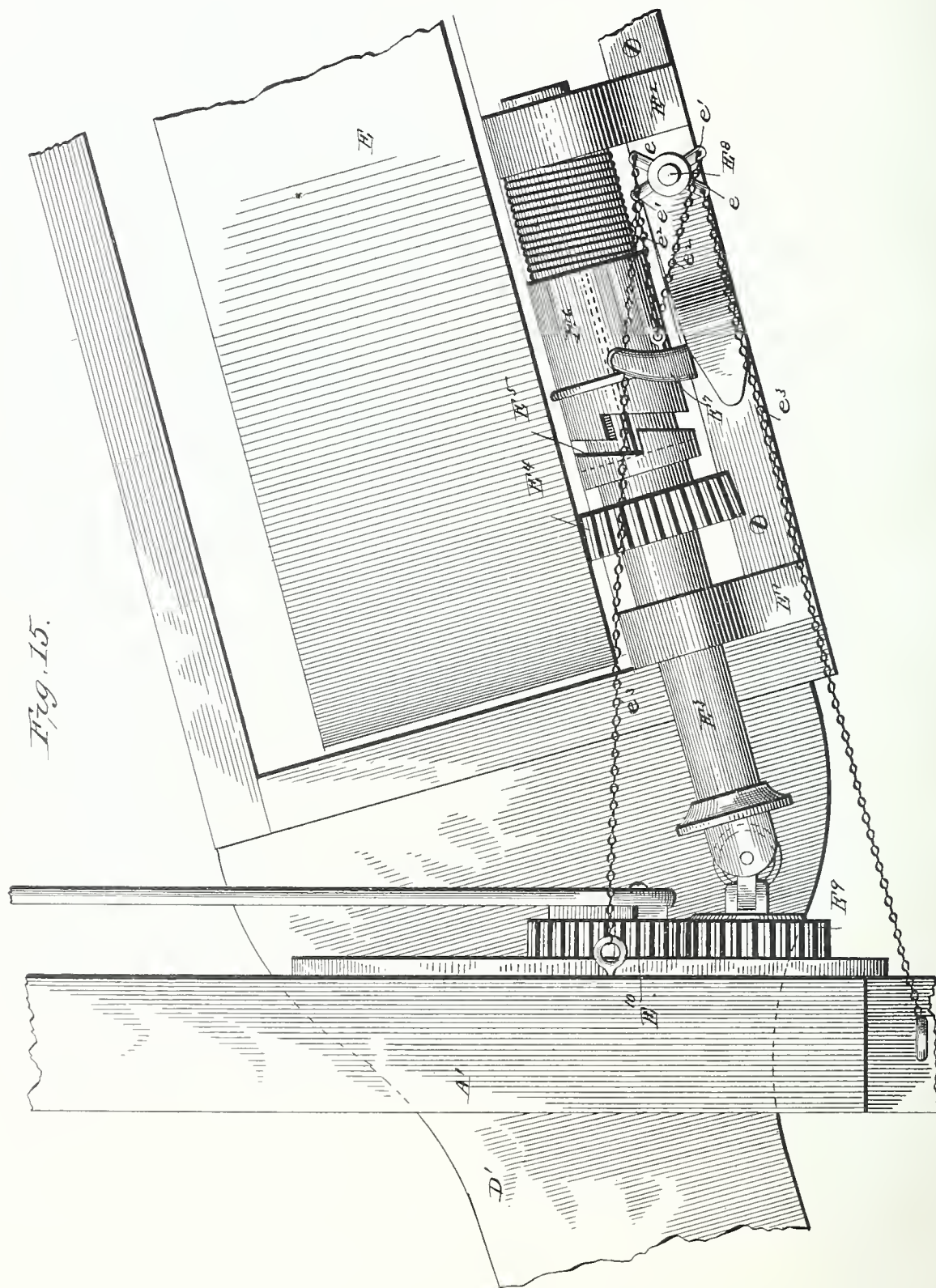
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M. L. NICHOLS.
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(No Model.)

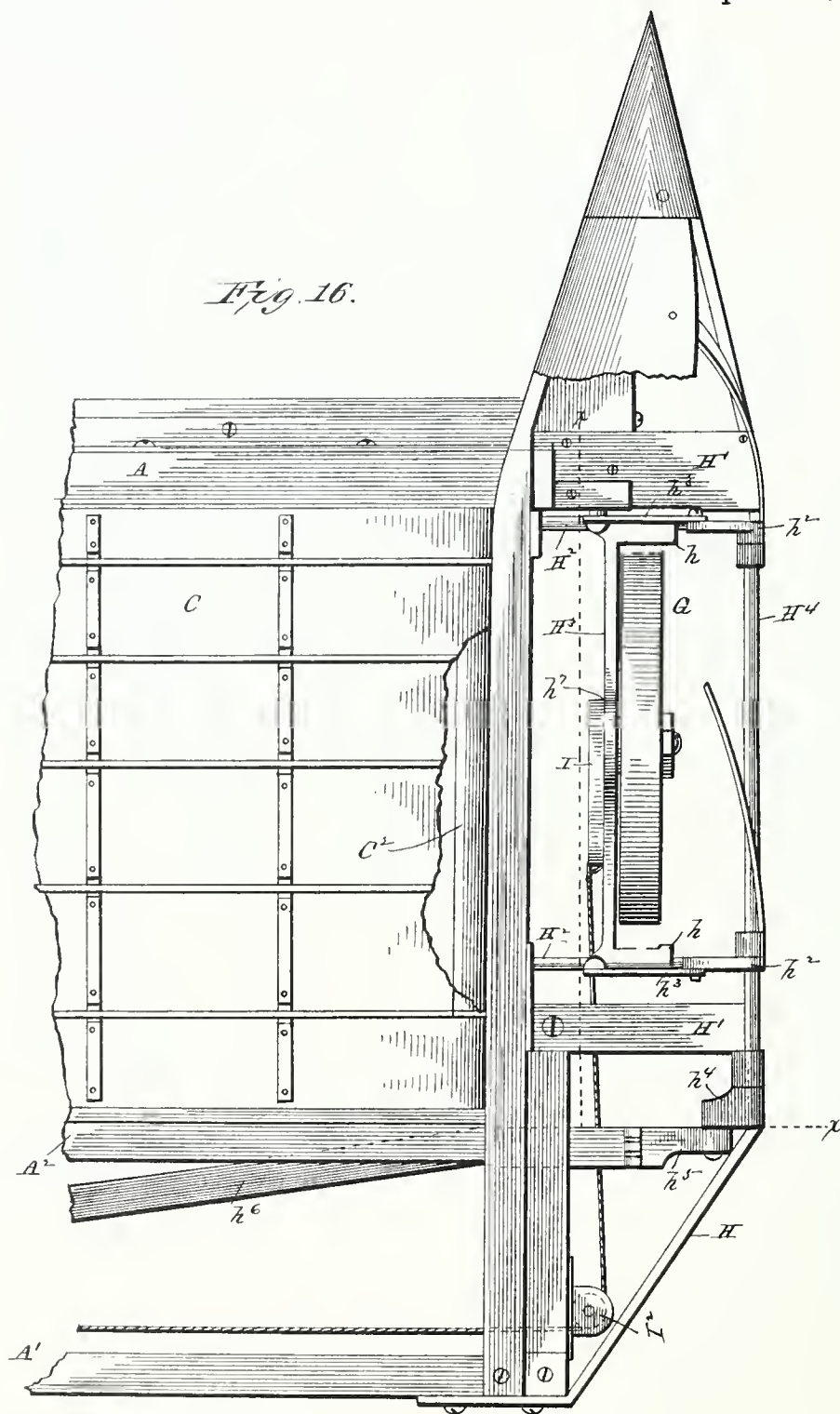
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No. 381,080.

Patented Apr. 10, 1888.

Fig. 16.



Witnesses.
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(No Model.)

12 Sheets—Sheet 10.

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Fig. 17.

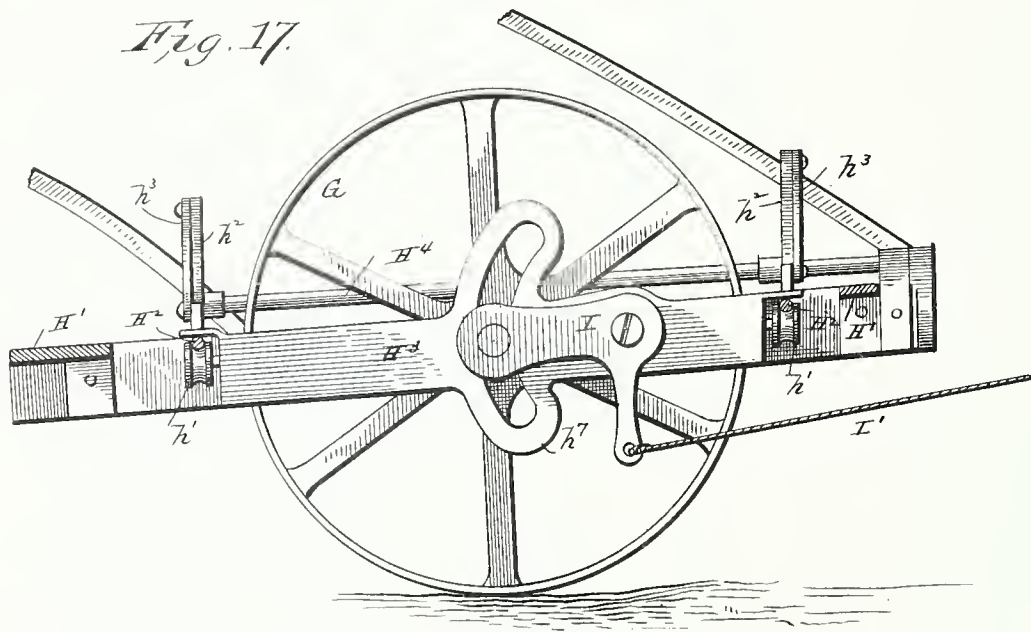
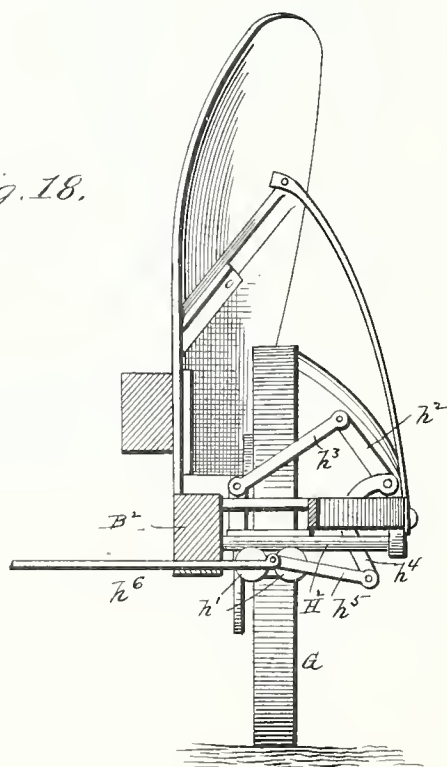


Fig. 18.



Witnesses.
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Inventor,
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By his Attorney,
Alex. Mahon.

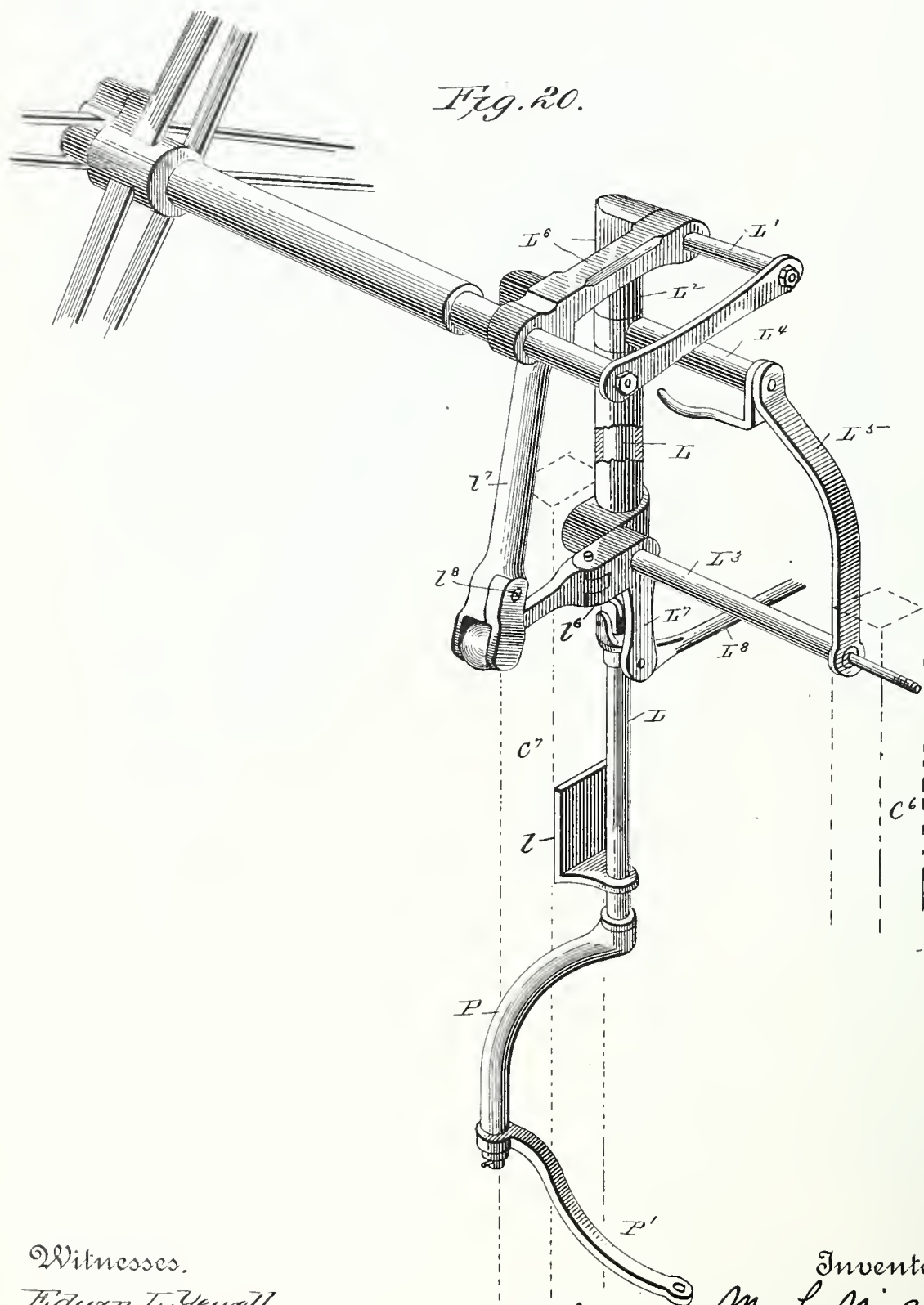
(No Model.)

12 Sheets—Sheet 12.

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No. 381,080.

Patented Apr. 10, 1888.



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UNITED STATES PATENT OFFICE.

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GRAIN-BINDING HARVESTER.

SPECIFICATION forming part of Letters Patent No. 381,080, dated April 10, 1888.

Application filed January 11, 1887. Serial No. 224,025. (No model.)

To all whom it may concern:

Be it known that I, MARION L. NICHOLS, of the city, county, and State of New York, have invented certain new and useful Improvements
5 in Grain-Binding Harvesters, of which the following is a full and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to that class of machines particularly applicable for use with automatic binding devices, and in which the grain is delivered to said binding devices on a level, or nearly so, with the cutting apparatus and platform-carrier, and known as "low-down binders," and the parts constituting the machine herein shown and described are designed to operate conjointly to act upon the grain and to adapt the machine to the various conditions incident to the harvest-field, so that
20 the grain shall be properly carried into the cutters, cut, deposited upon the platform, and properly presented to the binding devices to be readily and properly bound thereby, the binding devices forming the subject of a separate application of even date herewith.

The invention consists in a novel manner of mounting the harvester-frame upon two or more wheels, having pivotal connection therewith, to operate conjointly one with the other, whereby the frame may have a lateral motion actuated by and relative to the wheels in turning the machine.

It further consists in supporting the wheels in the frame-bars, having pivotal connections with the main frame, and arranged to engage and be actuated one by the other in the movements of the machine.

It further consists in mounting the harvester-frame between pivoted supporting-wheels, whereby an unobstructed and direct passage for the grain from the carrier to the binding devices is obtained, while providing for the ready turning of the machine and avoiding the dragging of the wheels in the ground and the consequent extra strain upon the team.

It further consists in connecting the tongue with the front supporting-wheel, whereby the swinging movement of the tongue is communicated to the main frame through the frame-bars of the wheels.

It further consists in the combination, with the main supporting-wheel, of an end or grain wheel having a connection therewith, whereby the frame is caused to move endwise relatively to all of said wheels.

It further consists in the combination of the front supporting-wheel, having its supporting-frame pivotally connected with the frame, and an adjustable grain-wheel with devices connected with said wheels and the main frame to raise and lower the frame relatively to said wheel simultaneously and independently of the master-wheel, for raising and lowering the cutters.

It further consists in a novel manner of mounting the outer or grain wheel in the frame and the means for connecting the same thereto.

It further consists in a novel manner of connecting the driving mechanism with the frame, whereby the same is, with the devices to which it communicates motion, thrown out of action automatically in turning the machine.

It further consists in combining the swiveling sleeved reel-post mounted in the main frame with the turning mechanism, whereby the reel is swung out of the way in turning the machine.

It further consists in the combination of the automatically-operated swiveling sleeved reel-post with means for raising and lowering the reel in its various angles of adjustment.

It further consists in the combination of the carrier extending inward beyond the cutters and a vertically-arranged butt-rake located between the cutting apparatus and binding devices, with means arranged adjacent to the cutters for imparting both an endwise and reciprocating motion to the rake to even up the butts and carry the grain toward the binding devices.

It further consists in certain novel features in the construction and arrangement of the several parts, all as hereinafter described.

In the accompanying drawings, Figure 1 is a perspective view of the machine complete, taken from the stubble side, showing the relation of the binding devices thereon. Fig. 2 is a plan or top view of the machine with the reel and binding devices removed. Fig. 3 is

a bottom view showing the rear wheel removed, also showing one manner of connecting the frame-bars of the main supporting-wheels, also one means for connecting the reel-post with the turning mechanism and the means for driving the reel and rake, also showing the outer or grain wheel and one manner of connecting it with the frame-bars of the turning mechanism. Fig. 4 shows a modification in the manner of connecting the frame-bars of the wheels; Fig. 5, a modification in the manner of connecting the swiveling reel-post with the turning mechanism. Fig. 6 is a side view of the master-wheel and frame, showing the clutches and shaft and the automatic shifting mechanism. Fig. 7 is a section through a portion of the frame, showing the manner of mounting and controlling the reel, also the manner of driving the same. Figs. 8, 9, and 10 are detached views of the reel-post and sleeve. Fig. 11 is a side view of the front supporting-wheel, showing the manner of connecting it with the frame and the means for changing the relation of the frame thereto for raising and lowering the cutters. Fig. 12 is a perspective view of the rake and the means for reciprocating and giving endwise movement to the same. Fig. 13 is a plan or top view of a portion of the cutting apparatus and carrier, showing the relation of the rake thereto, also showing by dotted lines the path of movement of the rake. Fig. 14 is a section through the front sill of the machine, showing one of the guard-fingers and a section of knife. Fig. 15 is a plan view of a portion of the master-wheel and its supporting-frame, showing the manner of communicating motion therefrom to the operating parts of the machine and the means whereby the driving mechanism is thrown automatically into and out of action. Fig. 16 is a top view of the outer end of the platform, showing the arrangement of the outer or grain wheel. Fig. 17 is a section of the outer end of the frame, taken through the line *xx*, Fig. 16, showing the manner of connecting the grain-wheel-supporting frame with the machine and the manner of supporting the wheel therein. Fig. 18 is a section through the rear end of the grain-wheel-supporting frame, and Fig. 19 is an end view showing the wheel and its connections complete. Fig. 20 is a detached perspective view of the reel-post and attachments with sprocket-wheels removed.

The main frame is made in rectangular form, and consists of the front and rear sills or bars, *A A'*, inner cross-bars, *B B'*, and an outer cross-bar, *B²*. The distance between the front and rear sills, *A A'*, is made wider than the apron or carrier, and behind the carrier or apron is arranged a bar, *A²*, connected at the outer end to the cross-bar *B²* and at the inner end to a cross-bar, *B³*. The carrier or apron *C* extends from the outer or grain side of the machine past the inner end of the cutting apparatus, passing around and being supported by rollers *C' C²*, one located near the grain-wheel and the other between the cross-bars *B'*

B³, so that the apron shall pass around the bar *B³* and move in near relation to the outer face of the bar *B'*, the binder-frame being located upon the bars *B B'*, so that the grain deposited upon the apron or carrier in the rear of the cutting apparatus shall be carried by the same into position to be acted upon by the binding devices, the space behind the apron and between the bar *A²* and rear sill, *A'*, being closed by a plank or covering, *A³*.

An angle bar or iron, *A⁴*, is bolted to the forward frame-bar, *A*, and extends from end to end of the same, to which the guard-fingers are bolted, and which bar or iron forms a support or bearing for parts of the mechanism, hereinafter referred to, located between the inner shoe and the binder-frame.

In suitable angle-plates, *C⁴ C⁵*, connected to the front sill and angle-bar, are supported upright posts *C⁶ C⁷*, one located adjacent to the inner shoe and the other adjacent to the frame bar or timber *B'*, said posts being connected near their upper ends by a cross-bar, *C⁸*. Similar posts, *C⁹ C¹⁰*, are connected to the rear sill, *A'*, in line with the front posts, being similarly connected near their upper ends by a cross-bar, *C¹¹*. The frame thus constructed is mounted upon bars or supports *D D'*, which have vertically-arranged pivotal connections *d d'* therewith, the rear bar, *D'*, extending out behind the main frame and supporting the rectangular frame for the master-wheel *E*, which is rigidly secured thereto. The front support or bar, *D*, extends out beyond the main frame, and has formed near its outer end lugs or ears *d²*, through which the frame *F*, for the front supporting-wheel, *F'*, is connected by a rod or shaft, *d³*. This frame is composed of two arms rigidly connected to the axle of the wheel, one upon each side thereof, and extending back beyond their points of connection with the bar *D'*, and being in turn connected by a yoke or bail, *F³*, hereinafter referred to.

The supports or bars *D D'* are shown as extending inward beyond their pivotal connection and into engagement with each other, and the bar *D'* provided with a slotted end, *d⁴*, a portion being made straight and with a curved end, and the arm *D* as provided with a projecting pin, *d⁵*, engaging and adapted to move in said slot, the construction and arrangement being such that in turning the front wheel to turn the machine the pin on said arm will be caused to move through the slot and turn or move the bar *D'* on its pivot, and the rear wheel to be turned to an opposite inclination, or into proper position to follow in the curved path, or nearly so, of the front wheel, this movement causing the frame to change its relation endwise to the supporting-bars, so that the machine may readily turn the curves, permitting the front wheel to be turned at a greater angle than the rear wheel to facilitate the turning of the machine within a narrow space.

A modification in the manner of engaging

the two bars is shown in Fig. 4, in which segmental toothed faces formed on the end of each bar to engage each other, and which construction operates, as will be readily seen, in a similar manner to that shown in Fig. 3.

The outer grain-wheel, G, is supported in suitable bearings at the end of the machine in the following manner: A frame or bar, H, is bolted to the rear sill, and extends out therefrom at an angle of about forty-five degrees, more or less, to about in line with the frame-bar A², from which point it extends forward parallel with the cross-bar B² to a point about on a line with the front sill, A, where it is bent inward at about the same angle with its rear end to form a support for the divider point. This frame-bar is supported between its two ends by cross rods or bars H', secured to it and to the cross-bar B² of the frame. Between these bars and secured in a similar manner are arranged rods H², forming tracks or guideways, hereinafter referred to. A frame, H³, has its ends h bent at right angles to its face, and in which ends are mounted friction-wheels h', having their peripheral faces formed to fit and engage the rods H².

A rock-shaft, H⁴, mounted in suitable bearings formed with or secured to the frame H, has connected to it near each end a rod or link, h², which are in turn connected with links h³, secured to lugs formed or attached to the frame H³. At the inner end of the rock-shaft H⁴ is rigidly secured a bent depending arm, h⁴, having a link, h⁵, connected therewith, which is in turn connected with a rod, h⁶, mounted in suitable guideways in the frame, and which rod extends from its point of connection with the link h⁵ to and is connected with the wheel-supporting bar D', for a purpose hereinafter explained.

The frame H³ is provided centrally of its length with a curved slotted portion, h⁷, through which the axle of the wheel G passes, the wheel being mounted upon an axle formed with or projecting from the face of one end of a bell-crank lever, I, pivoted in the frame H³, the other arm extending down from the pivotal point, and has connected to it a cord or chain, I', which passes back and around a pulley, I², mounted in the bar B², thence longitudinally of the frame over a pulley, I³, up over a pulley, I⁴, and thence forward and is connected to a shaft, I⁵, mounted in bearings in the post C⁶. This shaft extends through the post, and has mounted upon its opposite end a toothed wheel, I⁸, which engages with a worm-gear, I⁹, on the end of a shaft, K, supported in bearings secured to the front post, C⁶, and the rear post, C⁹, the shaft at its rear end being provided with a crank or handle, K', within convenient reach of the driver.

The bail F³, connecting the arm forming the frame or support for the front supporting-wheel before referred to, has connected to it a chain, F⁴, which passes thence over a pulley, F⁵, mounted in bearings projecting from the face of the post

C⁶, the pulley being in front of and in line with the portion of the shaft I⁵ extending through the post before referred to, the chain F⁴ passing over the pulley and being connected to the shaft, the post being cut out at this point to give sufficient room on the shaft to permit the winding of the chain thereon.

From the foregoing it will be seen that, the front and end or grain wheel having pivotal connections with the frame and being suspended and controlled from and by the same operating mechanism, the relation of the frame to both to raise and lower the cutters may be simultaneously changed by the driver, the means being positive in their action, and can be accomplished with little exertion on the part of the driver, and being held at any point in the range of movement positively and without the intervention of any stops or holding devices.

The rod h⁶, which is connected with the depending arm on the rock-shaft H⁴, which controls the movement of the frame endwise relatively to the grain-wheel, as before stated, is connected with the wheel-supporting bar D', and consequently any movement of the frame endwise caused by the movement of said wheel-supporting bars in the turning of the machine will permit the frame to also move relatively to said grain-wheel, and consequently further facilitate the ease with which it may be turned, preventing any dragging of the grain-wheel consequent to the necessity for end movement in turning, which would be the case if the wheel was rigidly fixed to the frame.

The rod h⁶, while being shown and described as being connected with the supporting-bar D', may, if preferred, be connected with the bar D or with the tongue, as shall be found desirable as occasion shall require.

The master-wheel E, as before stated, is supported in a rectangular frame rigidly secured to the frame-bar D', and one of the side timbers of the frame has mounted upon it bearings E' E² for the shaft E³, through which motion is communicated from the master-wheel to the various parts of the machinery. This shaft has loosely mounted upon it, between the bearings, a pinion, E⁴, having a clutch-face, E⁵, upon the hub thereof, and has also mounted upon it a key-seated sleeve, E⁶, with a corresponding clutch-face to engage the clutch-face on the hub of the pinion, being held engaged therewith by means of a spirally-wound spring located upon the shaft between the end of the sleeve and the bearing E², and being held out of engagement therewith by means of an arm or lever, E⁷, connected to said sleeve and to the frame. Upon the frame, adjacent to the bearing E², is located a post, E⁸, upon which are mounted two independently-operating swiveling or oscillating levers, e e', one arm of each of which is connected by a short chain, e², with the lever E⁷, and the other arm of each lever being connected by a chain, e³, with the

frame of the machine, and at such a point at either side of the pivotal center on which the master-wheel swings as to act upon the lever to throw the clutch-sleeve out of engagement with the pinion-clutch during the latter part of the action of the wheel in turning the machine.

While in practice the means herein described for connecting the clutch mechanism with the frame has been found the most simple and convenient, still it will be readily seen that other means than those described may be employed without involving other than mechanical skill to suggest them.

The shaft E^3 is connected to a shaft mounted in the frame through a universal-joint connection, which shaft carries on its end a pinion, E^9 , which in turn engages and communicates motion to a pinion, E^{10} , on the end of the roller-shaft C' , from which motion is communicated to the various parts of the machine. This pinion is also provided with a wrist-pin, to which the pitman for driving the cutters is connected.

The reel-post consists of a shaft, L , in two parts, connected by a universal joint having an arm, L' , at its upper end, extending at right angles therefrom, and a sleeved portion, L^2 , surrounding the upper section of the shaft.

The lower portion of the shaft is mounted in bearings I , secured to the post C' , and the sleeve is connected at its lower end or base through a lug or ear to a shaft, L^3 , extending between the posts C^6 C^7 , and is supported at its upper end by a projecting arm, L^4 , parallel with the shaft L^3 , being connected with said shaft through a bent arm, L^5 . The reel-shaft is connected to the upper end of the post from the arm L' by a link, L^6 , and in such manner as to move upon said arm as a pivot.

Upon the shaft L^3 is mounted a bell-crank lever, L^7 , the outer end of the projecting arm L^6 of which is hinged or jointed, and has its end made in spherical form and secured to a divided link-arm, L^7 , having semi-spherical recesses in each portion to embrace the end of the arm L^6 , the two parts of the link being held together and to the arm L^6 by a screw or bolt, L^8 , the upper end of the link L^7 being connected to the link L^6 through a lug, L^9 , projecting therefrom. The outer arm of the bell-crank lever L^7 is connected to a rod, L^8 , which in turn is connected with a quadrant-lever mounted on the cross-bar C^{11} , which lever is provided with a suitable spring-latch to engage the notches in the quadrant-rack, and by means of which connections the reel may be adjusted up and down. On the sleeved portion, at right angles to the arm L^4 , is arranged a lug, L^{10} , to which a link, L^{10} , is connected, and which link at its rear end is in turn connected with a divided band, C^{12} , embracing a bar, C^{13} , extending from front to rear of the frame. The bar is bored out longitudinally and is provided with a central transverse longitudinal slot, M , and in the bar, in suitable

bearings, is mounted a shaft, M' , which is provided on that part passing through the slot with a worm or screw-thread, m' , and which portion engages a nut held between the divided band, by means of which the band is caused to move on the bar and to rock the reel-post on the shaft L^3 and move the reel to or from the cutters, the shaft M' being provided on its rear end, adjacent to the driver's seat, with a crank, M^2 , for turning said shaft.

A miter-pinion, N , on the end of the roller-shaft engages a similar pinion, N' , on a shaft, N^2 , parallel with the cutters, communicates motion to a sprocket-wheel, N^3 , and from which motion is communicated to the larger wheel of a double sprocket, N^4 , on the shaft L^3 . A sprocket-chain running from the smaller wheel of the sprocket N^4 communicates motion to another double sprocket, N^5 , on the shaft L' , and from the smaller one motion is communicated to a sprocket-wheel, N^6 , on the reel-shaft. The lower end of the shaft L of the reel-post has rigidly attached to it a bent arm, P , extending outward and downward therefrom, and which arm is connected to the wheel-supporting bar D through a link, P' . By this means of connecting the reel-post with the turning mechanism it will be seen that a pivoted front supporting-wheel with the tongue attached may be used with a harvester, as the reel will be automatically turned out of the way of the team in turning the machine. The universal joint in the shaft, the hinged arm, and the ball-and-socket joint of the bell-crank lever and the sleeve connection heretofore described permit the reel to be adjusted to pick up lodged or fallen grain, or for other purposes, under any of the various angles of relation of the reel to the machine, without strain or friction on the parts.

A butt rake, R , is mounted in a suitable bearing-plate secured to the frame-timber A in rear of the posts C^6 C^7 . This rake consists of a board arranged vertically upon one edge, and made of such length as to operate between the inner edge of the cutting apparatus and the point at which the grain is taken by the binding mechanism. This board is provided on its rear side with slotted guideways R' , one near each edge, through which a rod mounted in a suitable bearing, R^2 , secured to the post C^6 , passes, and which rod, while forming a pivotal connection for the inner end of the rake, permits said rake to reciprocate endwise. Near the forward end of the rake is formed or attached a lug, S , which is connected with an arm, S' , of a revolving shaft, S^2 , mounted in a support, S^3 , secured to the bearing-plate. The bearing-plate at this point extends outward and is provided with a circular opening to receive a pinion connected to the end of the shaft S^2 , and which pinion engages with and is driven from a pinion, S^4 , mounted on the shaft N^2 , which communicates motion to the reel through the sprocket-wheel and pinion heretofore described. The rake is provided with

suitable curved fingers, S⁵, on the end thereof adjacent to the cutters, to facilitate the handling of the grain. By this construction and manner of operating the rake it will be seen that the rake has both a lateral and swinging motion imparted thereto, and moves at its governing end in an elliptical path or orbit, acting upon the grain to force it toward and with the carrier, and, by extending between the cutting apparatus and binding devices, serves as a guide to direct the grain from the cutters to said devices.

Having now described my invention, I claim—

15 1. A harvester-frame, in combination with two or more supporting-wheels having pivotal connections with the frame and means for connecting them together intermediate of their pivotal connections, substantially as described, whereby the main frame is caused to have a lateral motion relative to the ground actuated by the wheels in turning the machine.

2. The combination of the main frame with a divided supporting-frame carrying the wheels at its outer ends and having pivotal connections with the main frame at points between the wheels and its point of division, and means for causing the parts of the frame to be situated, one by the other, in the movement of the wheels in turning the machine, substantially as described.

3. The combination of the binder-frame, a main supporting-wheel arranged in rear thereof and having a pivotal connection therewith, a front supporting-wheel, also having a pivotal connection with the frame, a tongue connected to the wheel-frame, and means for connecting the wheel-frames intermediate of their pivotal connections, so as to move in unison, substantially as described, whereby the swinging of the tongue will cause the rear wheel to be turned at an opposite inclination to the front wheel and the frame to have a lateral motion relative to the ground, as set forth.

45 4. The combination, with the front and rear supporting-wheels having the carrier and binding devices located between the same, of an end wheel located at the grain side of the machine and having its frame supported at front and rear, substantially as described, whereby the main frame may move endwise in relation to said end wheel in turning the machine.

55 5. The combination of the front and rear supporting-wheels connected by means of the pivoted arms, the end or grain wheel connected to one of the arms of said supporting-wheels, and the main frame supported by the wheels, substantially as described, whereby the main frame is caused to move endwise in turning the machine, as and for the purpose set forth.

65 6. The combination of the harvester-frame, an outer or grain wheel supported in guideways, and the arms or levers connecting the grain-wheel with the turning mechanism, substantially as and for the purpose set forth.

7. The combination of the harvester-frame, an outer or grain wheel having its frame supported at front and rear in guideways in the harvester-frame, and means, substantially as described, for connecting the grain-wheel with the turning mechanism.

8. The combination of the harvester-frame, an outer or grain wheel supported in guideways, the rock-shaft in the harvester-frame, the arms or levers for connecting the rock-shaft with the grain-wheel frame, and means, substantially as described, for connecting the rock-shaft with the turning mechanism, as and for the purpose set forth.

9. The combination of the slotted supporting-frame for the grain-wheel, mounted on tracks or guideways and connected through mechanism with the pivoted supporting-wheels, the bell-crank lever pivoted to the supporting-frame and carrying at one end the grain-wheel, and means, substantially as described, connected to the other end of said lever for raising and lowering the grain-wheel, all substantially as set forth.

10. The combination of the cutting and grain delivering and binding devices described, and means for operating the same, with the automatic clutch mechanism acting to throw the same into and out of action in turning the machine, and a lever or shifting device for throwing the mechanism into and out of action by hand, substantially as set forth.

11. The combination of the main frame with the divided supporting-frame carrying the wheels at its outer ends and having pivotal connections with the main frame at points between the wheels and its points of division, a driving and driven mechanism, and an automatic and hand-operating clutch, substantially as described, whereby in turning the machine the driven mechanism may be thrown automatically out of action or may be thrown out by hand, as set forth.

12. The swiveling reel-post, combined with means, substantially as described, for automatically acting upon the reel to turn it in turning the machine, as and for the purpose set forth.

13. The combination of the harvester-frame, a pivoted wheel-supporting frame, a swiveling reel-post, and means, substantially as described, for connecting the reel-post with the wheel-supporting frame, as and for the purpose set forth.

14. The combination, with the front and rear supporting-wheels connected by the pivoted arms, of the swiveling reel-post connected with the arm of one of the supporting-wheels, substantially as described, whereby the reel is caused to be moved automatically out of the way of the team in turning the machine, as set forth.

15. A swiveling reel-post carrying the reel, combined with the machine to move said reel to and from the cutters automatically in turning the same, and means, substantially as de-

scribed, whereby the reel can be raised and lowered in its various angles of relation to the machine, as and for the purpose set forth.

16. The combination of the carrier extending in beyond the cutters, the binding devices located at the inner end thereof, a vertically-arranged butt-rake pivoted near the inner end of the carrier and extending to the cutters,

and means, substantially as described, arranged adjacent to the cutters, for imparting to both an endwise and reciprocating motion to the rake, as set forth.

MARION L. NICHOLS.

Witnesses:

ALEX. MAHON,
WM. F. HUNTEMANN.

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(No Model.)

A. PAPE.
BUNG AND AIR VENT.

No. 381,081.

Patented Apr. 10, 1888.

Fig. 1.

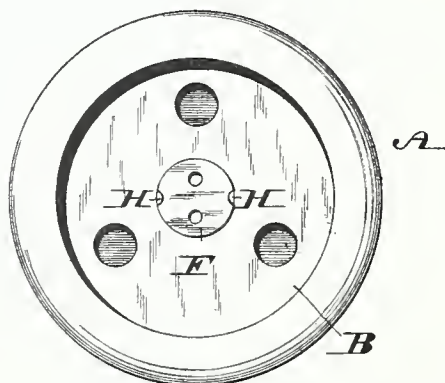


Fig. 2.

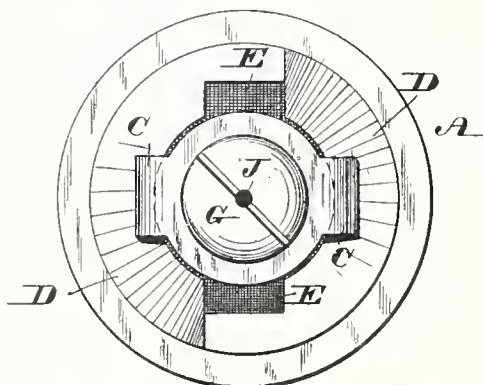


Fig. 3.

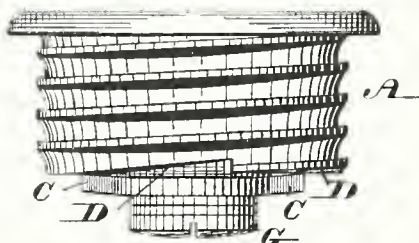


Fig. 4.

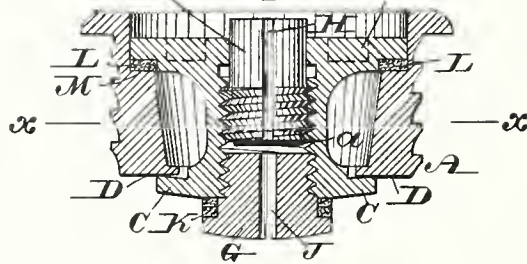
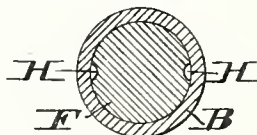


Fig. 5.



WITNESSES:

Theo. Rollé,
A. P. Jennings.

INVENTOR:

BY

Anthony Pape
Friedrich Kuhn

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ANTHONY PAPE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO JOSEPH MORWITZ, OF SAME PLACE.

BUNG AND AIR-VENT.

SPECIFICATION forming part of Letters Patent No. 381,081, dated April 10, 1888.

Application filed January 23, 1888. Serial No. 261,596. (No model.)

To all whom it may concern:

Be it known that I, ANTHONY PAPE, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Bungs and Air-Vents, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of improvements in bungs and air-vents for barrels, &c., the same embodying means for firmly connecting the vent with the bung, and means for regulating the passage of air through the vent.

Figures 1 and 2 represent views of the outer and inner faces of a bung and air-vent embodying my invention. Fig. 3 represents a side elevation thereof. Fig. 4 represents a vertical section thereof. Fig. 5 represents a section of a portion on line *x x*, Fig. 4.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A represents a bushing which is hollow and exteriorly threaded, so as to be readily screwed to a barrel, cask, keg, &c.

B represents a bung which is fitted into the bushing A, and having on its lower portion radial lugs C, which are adapted to engage with spiral faces D on the underside of the bushing A, it being noticed that the inner periphery of the bung is vertically grooved, so as at E to permit the passage of the lugs C through the bushing, in order to reach said spiral faces D.

The bung B has a central bore with a screw-threaded portion, in the lower part of which is located a detachable valve-seat, G, while in the upper part is located the valve F, which has in its sides the ducts or passages H, leading from the top to the bottom thereof, and the seat G has a central duct or opening, J.

A packing, K, is interposed between the shoulder at the base of the valve-seat G and under the side of the bung B, and a packing, L, is interposed between the head of the bung B and the shoulder M on the inner wall of the bushing. Suitable packing, *a*, is secured to

the under face of the valve F, so as not to cover the lower end of the ducts H.

It will be seen that when the bushing is in position on a barrel, cask, keg, &c., the bung B is inserted therein, the lugs C passing through the grooves E, as has been stated. The bung is now rotated and the lugs C leave the base of the grooves E and ride on the spiral faces D and tighten thereagainst, whereby the bung is clamped to the bushing. The bung is closed in a reliable manner by screwing the part F of the valve against the part G, thereby closing the bore of the bung.

When it is desired to admit air into the barrel, cask, keg, &c., the upper part of the valve is rotated so as to be unscrewed, and the duct J is thereby uncovered, so that air passes through the ducts H of the part F of the valve, and so reaches the duct J, from whence it is directed into the barrel.

The extent of air admitted into the barrel, &c., may be adjusted by properly rotating the part F of the valve, and the admission of air is entirely prevented by properly screwing the part F of the valve against the part G, whereby the base of said part F closes the top of the duct J, and connection between the barrel and the atmosphere thus ceases.

By rotating the bung B in the opposite direction from that required for tightening the same, the lugs C reach the grooves E, and the bung may then be withdrawn, leaving the interior of the bushing open. The bushing, bung, valve, and detachable seat are preferably formed of cast metal.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The metal bushing A, with the inner grooves, E, the shoulder M, and the spiral under face, D, in combination with the bung B, having the lugs C, the valve-seat G, with a shoulder bearing against the under face of bung B and having the central duct, J, and the valve F, with a side duct, H, substantially as described.

2. The metal bushing A, with inner grooves, E, and spiral under face, D, the bung B, with an interiorly-threaded portion, the exteriorly-screw-threaded valve-seat G, with shoulder
5 bearing against the under face of bung B and provided with central opening or duct, J, and the exteriorly-screw-threaded valve F, having side ducts, H, open at the top and bottom, and the packing a, secured to the under face of the said valve F, said parts being com- 10
bined substantially as and for the purpose set forth.

ANTHONY PAPE.

Witnesses:

JOHN A. WIEDERSHEIM,

A. P. JENNINGS.

(No Model.)

E. R. GRAHAM.
BRUSH.

No. 416,362.

Patented Dec. 3, 1889.

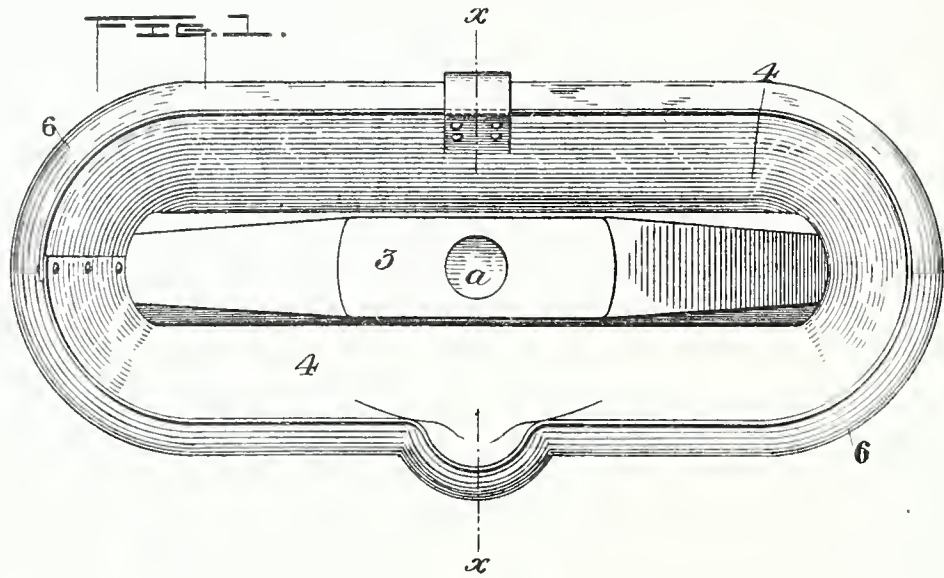


FIG. 2.

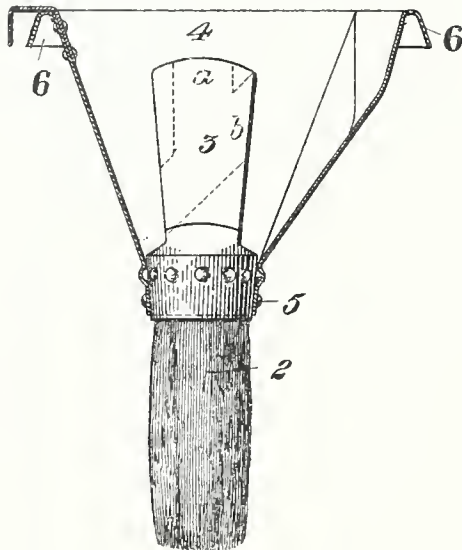
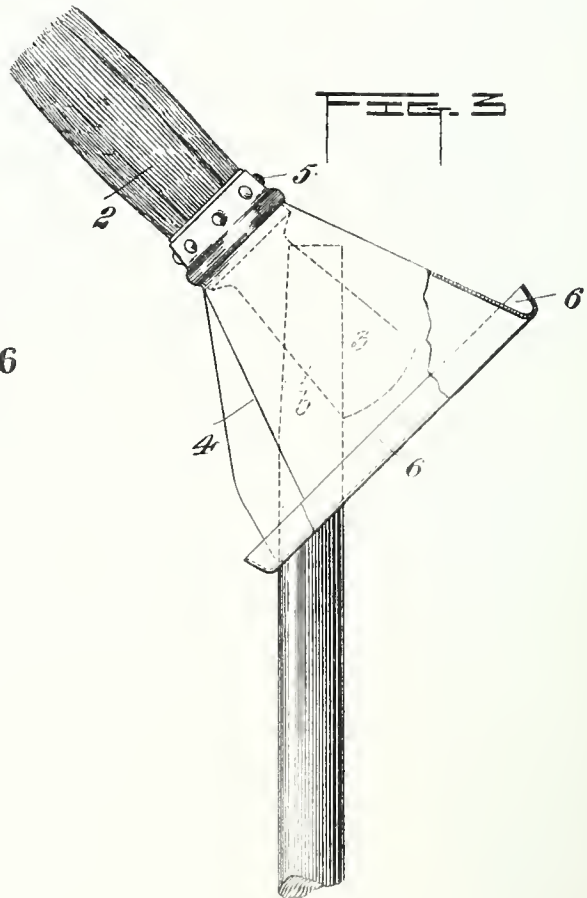


FIG. 3.



WITNESSES

W. H. Corwin
Jno. K. Smith

INVENTOR

Elizabeth R. Graham
by W. Baxwell & Sons
her Attorneys

UNITED STATES PATENT OFFICE.

ELIZABETH R. GRAHAM, OF PITTSBURG, PENNSYLVANIA.

BRUSH.

SPECIFICATION forming part of Letters Patent No. 416,362, dated December 3, 1889.

Application filed February 13, 1889. Serial No. 299,771. (No model.)

To all whom it may concern:

Be it known that I, ELIZABETH R. GRAHAM, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Brushes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of my improved brush. Fig. 2 is a vertical cross-section thereof on the line *x x* of Fig. 1. Fig. 3 is a side elevation of a modified form thereof.

Like symbols of reference indicate like parts in each.

My invention is designed to provide a brush to be used for whitewashing, painting, kalsomining, and similar purposes, which shall prevent the disagreeable and inconvenient spilling or running of the whitewash or paint compound from the brush upon the person using the same or on the floor.

The brush proper may be of the usual form, having bristles 2, and a handle 3, to which the bristles are attached.

4 is a shield or casing, which incloses the handle, but is open at the rear end to permit the insertion of the hand in grasping the brush. The shield is preferably made of sheet metal and is of flaring or bell shape, and is or may be attached to the handle of the brush by tacks or nails 5 or in any other suitable way. When thus constructed, the brush is used by grasping the body portion 3 with the hand, and the shield 4 fully protects the hand from liquid dripping from the bristles and protects the handle from the liquid when the brush is dipped into the paint pot or vessel.

If desired, the brush may be placed on the end of a stick or pole in painting or whitewashing places difficult of access, and for this

purpose the handle is provided with the usual pole-sockets *a* and *b*, one of which is formed in the side and the other in the end of the handle. In order to admit entrance of the pole into the lateral socket *b*, the side of the casing is preferably depressed or bent, as shown in each of the several figures of the drawings.

For the purpose of catching and retaining the liquid drip which may fall from the bristles upon the casing 4, I may provide the end of the latter with a peripheral gutter-shaped flange 6, as shown in Fig. 3. The liquid drip will flow into and collect in this gutter, and may be poured therefrom from time to time when desired.

The advantages of my invention will be appreciated by those who have occasion to use such articles. It is simple and cheap in its construction, and is of especial use for domestic purposes, where the uncleanness of brushes of the kind heretofore used has been particularly objectionable.

I claim as my invention—

1. The combination, with a brush, of a flaring shield or casing inclosing the handle or body portion of the brush and having its concavity opening backward from the brush, substantially as and for the purposes described.

2. A brush having a shield or casing inclosing the handle or body portion of the brush, and a gutter or drip-trough on the shield or casing, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 14th day of January, A. D. 1889.

ELIZABETH R. GRAHAM.

Witnesses:

W. B. CORWIN,
JNO. K. SMITH.

(No Model.)

C. PRESTON.
PAN FOR BAKING AND ROASTING.

No. 404,558.

Patented June 4, 1889.

Fig. 1.

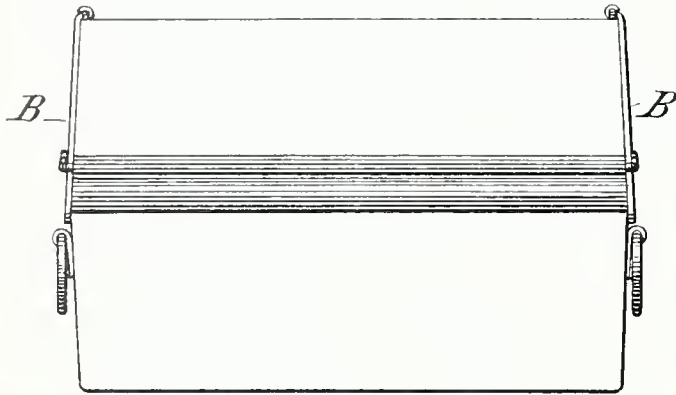


Fig. 2.

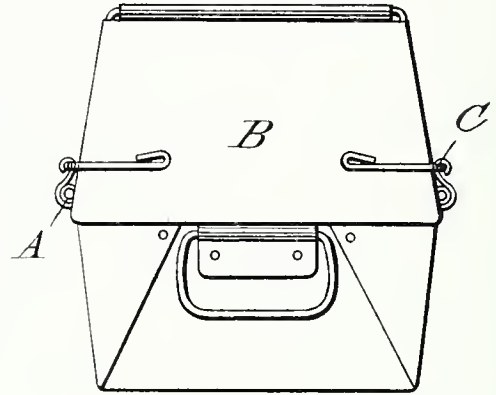


Fig. 3.

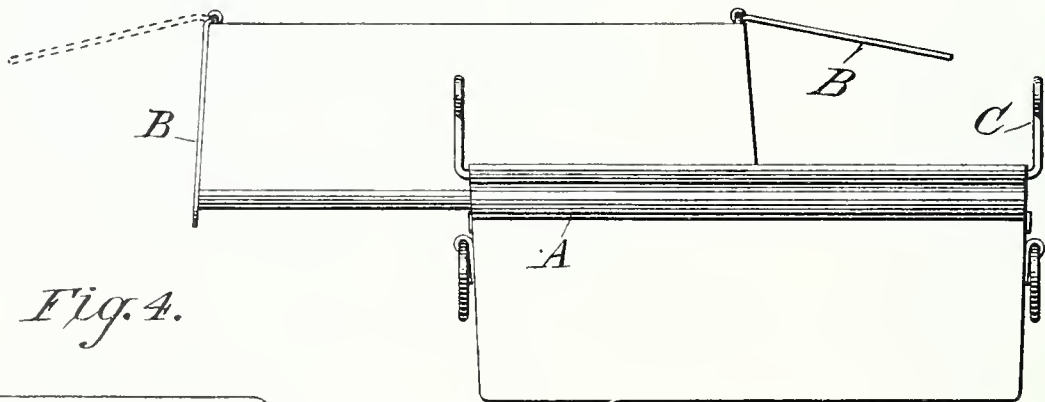


Fig. 4.

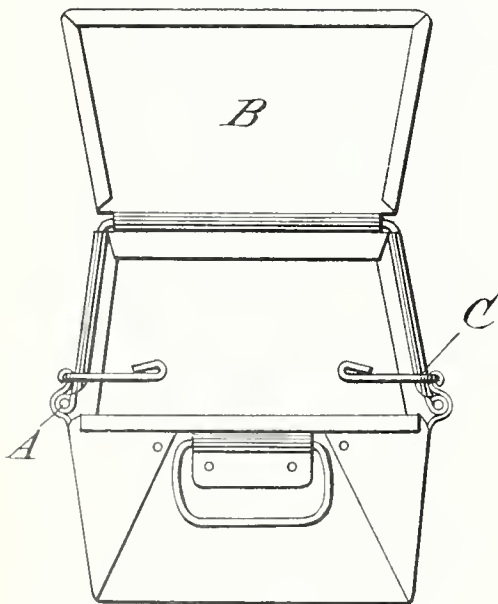
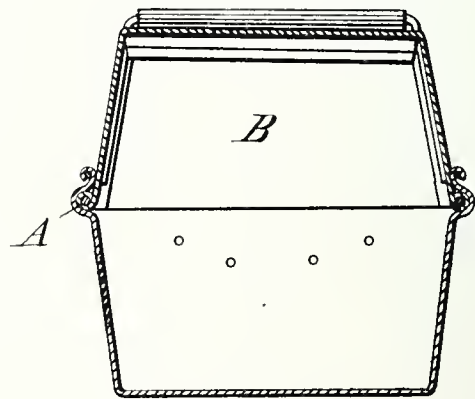


Fig. 5.



Witnesses:

James F. M. Guire
Thomas G. Taylor.

Inventor:

Clarissa Preston,

UNITED STATES PATENT OFFICE.

CLARISSA PRESTON, OF PITTSBURG, PENNSYLVANIA.

PAN FOR BAKING AND ROASTING.

SPECIFICATION forming part of Letters Patent No. 404,558, dated June 4, 1889.

Application filed September 24, 1888. Serial No. 286,255. (No model.)

To all whom it may concern:

Be it known that I, CLARISSA PRESTON, a citizen of the United States, residing at Pittsburg, in the county of Allegheny, State of Pennsylvania, have invented a new and useful Pan for Roasting and Baking, of which the following is a specification.

My invention consists of a pan with the ends turned up the same as an ordinary bread-pan, the sides extended up and grooved (see letter A) to permit a cover to slide on or off, and two wires running the full length of and half the width (see letter C) and bent across the ends of the pan, and a cover bent the shape of the pan, with groove to fit the groove of the pan and slide on or off, (see Figure 3, letter A,) the ends of said cover being closed by a gate or door (see letter B) fastened by a hinge to the top of the cover and held by wires across the end when closed. (See Fig. 2.)

I am aware that prior to my invention roasting-pans have been made and connected together by hinges, making a double pan; but the operator is compelled to remove the pan from the oven and raise one up before she can see the contents, which is not necessary with my invention.

Similar letters refer to similar parts throughout the several views.

Fig. 1 is a full-length side view of the pan and cover with both ends B closed. Fig. 2 is an end view of the pan and cover with the doors (letter B) closed and the wires C across the end to hold the doors in place. Fig. 3 is a full-length side view of pan and cover with cover partly drawn off, showing side grooves A with the doors B partly open and the side wires C raised to a perpendicular position. Fig. 4 is an end view of the pan with cover on, with the doors B raised to a perpendicular position and the wires C across the end. Fig. 5 is a cross-section of pan and cover.

I claim—

A bake-pan composed of upper and lower sections, the lower section having closed sides and ends and provided with longitudinal grooves along its upper edge, and the upper section having closed sides and hinged doors at its ends and resting in the grooves of the lower section.

CLARISSA PRESTON.

Witnesses:

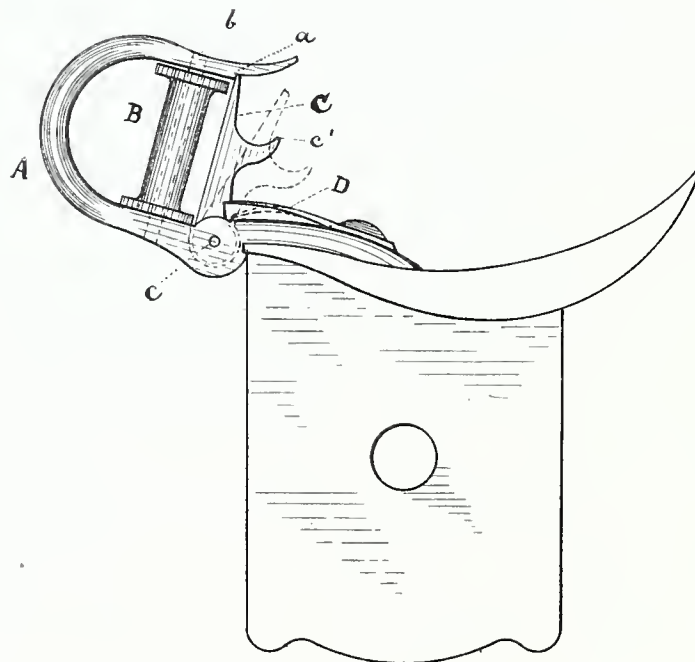
W. N. JARRETT,
A. C. JARRETT.

.(No Model.)

M. INGERSOLL.
CHECK HOOK FOR HARNESS.

No. 403,351.

Patented May 14, 1889.



Witnesses
Wm. Lechner
S. D. Dobbin.

Inventor
May Ingersoll
By *her* Attorney
Hallock & Wallack

UNITED STATES PATENT OFFICE.

MARY INGERSOLL, OF ERIE, PENNSYLVANIA.

CHECK-HOOK FOR HARNESS.

SPECIFICATION forming part of Letters Patent No. 403,351, dated May 14, 1889.

Application filed April 4, 1888. Serial No. 269,607. (No model.)

To all whom it may concern:

Be it known that I, MARY INGERSOLL, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Check-Hooks for Harness; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to check-hooks for harness; and it consists in certain improvements in the construction thereof, as will be hereinafter fully set forth, and pointed out in the claim.

My invention is illustrated in the accompanying drawing by a single figure, which is a side elevation thereof.

A is the check-hook.

B is a roller or sheave journaled on an axle, *b*.

C is a safety lock or catch, which is pivoted at *c* at the base of the hook, and acts against an offset, *a*, near the point of the hook, and D is a spring which acts upon the lock C.

The object of my invention is, first, to provide a harness-check hook with a sheave or roller across its span to receive and bear the checkrein, and, second, to provide a harness-check hook with a safety-lock, so that the horse cannot, by throwing up his head, unhook the checkrein.

The roller or sheave in the hook, as shown

in the drawing, serves to give the rein a pulley-bearing in the hook, so that the rein will move freely and allow the horse to turn his head from side to side without resistance from the rein, and it prevents wear upon the rein at the point where it is in contact with the check-hook.

The safety-catch C is a bar pivoted at *c* and having its free end in contact with the point of the hook A, and it has a horn, *c'*, to serve as a finger-pull to draw it back for the admission of the rein, as shown by dotted lines. It is immaterial how the spring is applied to the catch. I show in the drawing a flat tongue-spring, D; but I do not wish to be confined to any form of spring or manner of applying it.

I am aware that check-hooks have been made heretofore with sheaves and also with safety-catches, as in Patents Nos. 325,613, 254,377, and 148,500, and I do not, therefore, broadly claim these features.

What I claim as new is—

In a check-hook, the combination of the hook A, sheave B, within said hook, safety-bar C, pivoted at the base of said hook and reaching across its mouth, and a spring, D, acting upon said bar near its pivot.

In testimony whereof I affix my signature in presence of two witnesses.

MARY INGERSOLL.

Witnesses:

JNO. K. HALLOCK,

CHAS. B. LECHNER.

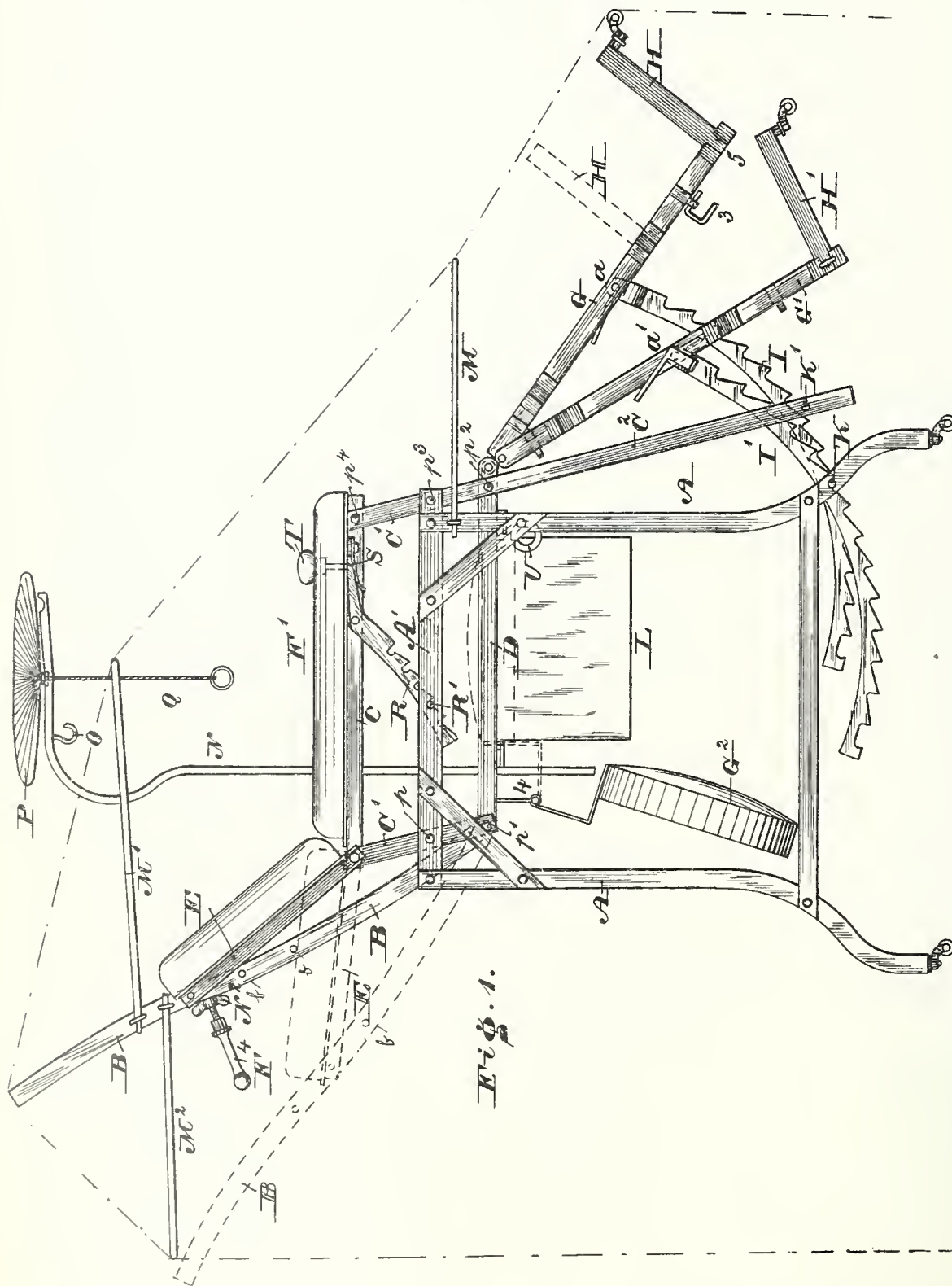
(No Model.)

2 Sheets—Sheet 1.

L. M. HOFFMAN.
INVALID CHAIR.

No. 410,591.

Patented Sept. 10, 1889.



WITNESSES:

Th. Rolle
A. R. Jennings.

INVENTOR:

Lina M. Hoffman
BY Widerheim & Fisher

ATTORNEYS

(No Model.)

2 Sheets—Sheet 2.

L. M. HOFFMAN.
INVALID CHAIR.

No. 410,591.

Patented Sept. 10, 1889.

Fig. 2.

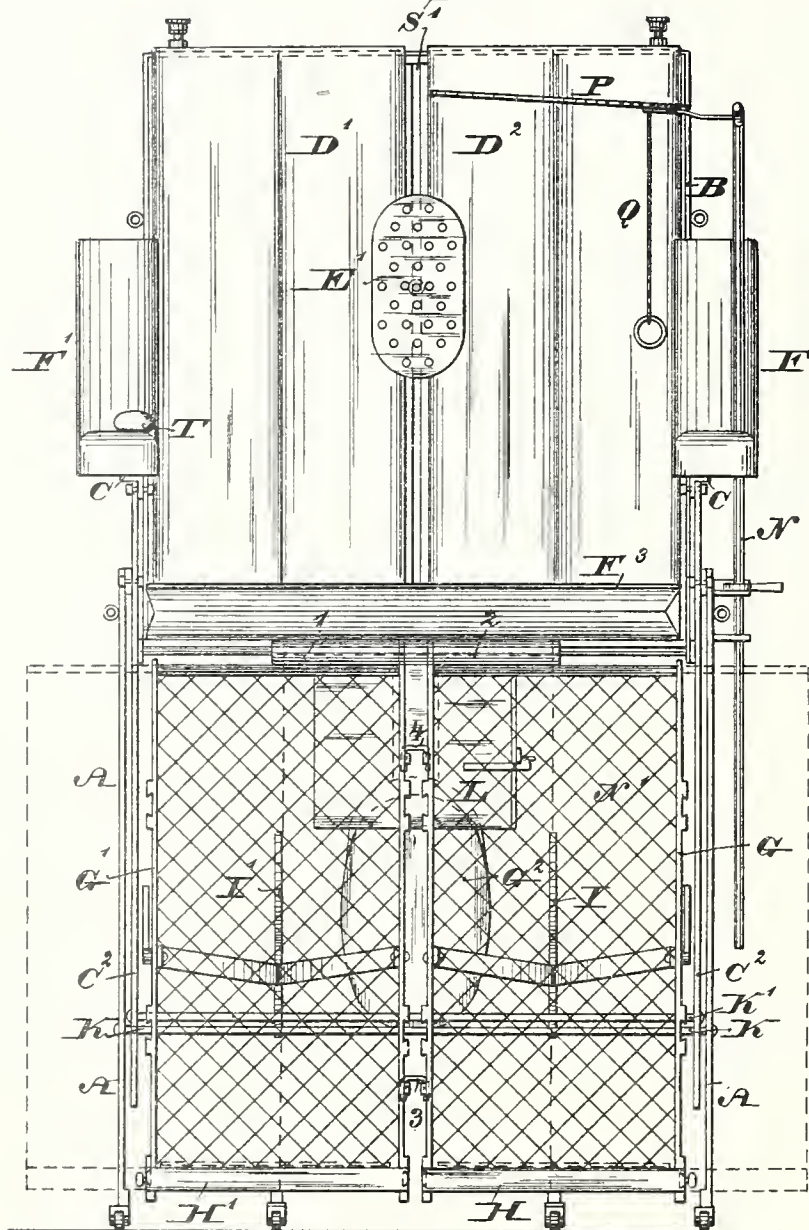
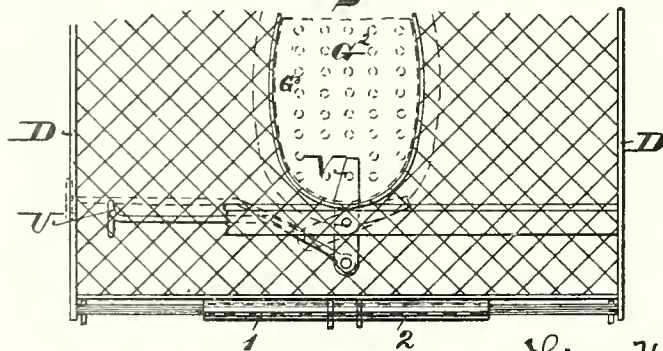


Fig. 3.



WITNESSES:

Th. Rollé.
A. P. Jennings.

INVENTOR:

Lina M. Hoffman
BY *Wiedersheim & Kuehn*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

LINA M. HOFFMAN, OF PHILADELPHIA, PENNSYLVANIA.

INVALID-CHAIR.

SPECIFICATION forming part of Letters Patent No. 410,591, dated September 10, 1889.

Application filed January 11, 1888. Renewed December 19, 1888. Serial No. 294,129. (No model.)

To all whom it may concern:

Be it known that I, LINA M. HOFFMAN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Invalid-Chairs, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to improvements in invalid-chairs; and to this end it consists in novel features hereinafter described, and particularly pointed out in the claims which follow this specification.

It will be fully understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 represents a side elevation of my improved chair. Fig. 2 represents a front elevation thereof. Fig. 3 represents a detail plan view of the seat and connections therewith.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A represents the frame of the chair, consisting of rigid standards with upper side bars A', braced as shown, and resting on casters.

B represents the back pivotally connected at p' to a swinging frame C C' D, which in turn is pivoted at front and rear to the standards of the frame at p p', &c.

E is a connecting rod or link having an opening in its upper end, and is pivotally connected at its lower end to the upper portion of the frame C C' D. In the sides of the back support B are openings b, whereby the said rod E may be secured at different places on the said support, and thus adjusting its position relatively to the seat-frame.

D' D² are air-cushions for the back of the patient, and F F' are arm rests or supports. The seat has an air-cushion F³, and the leg and foot rests are similarly provided. If desired, hot water may be used instead of air for filling the several cushions.

G G' are leg-rests pivoted to the frame by sleeves 1 2, and adapted to slide laterally, as shown in dotted lines in Fig. 2, so as to permit a surgeon or attendant to separate the legs of a patient. These leg-rests have foot-rests II II', removable, as shown at 5, and are adjustable vertically to different heights by means of the semicircular notched racks II',

pivoted at a a'. As the rests are raised up, the vertical racks II' sustain them at various angles on the cross bar or rod K. When the leg-rests G G' are in their lowest position, they rest against the cross-rod K', joining the vertical pivoted side bars C² C², so that as the frame C C' D is tilted said leg-rests are carried forward also.

R is a similar rack-bar adapted to hold the pivoted frame in any desired position by its backward thrust upon the pin R', fixed to the frame. This rack-bar is pivotally connected to the upper part of the swinging frame C C' D, and has a knob T, accessible to the surgeon or to any one desiring to change the relative adjustment of parts. It is held normally in locking position by a leaf-spring S.

L is a box fixed detachably to the frame of the chair beneath the seat, adapted to serve as a commode.

G² is a cushioned seat, pivoted to the rigid frame at 4 and adapted to be rotated into position when the commode is not in use.

P is a fan fixed by a spring to a standard N, which in turn is adjustably fixed to the frame of the chair, as shown in Fig. 2. To this fan is attached a cord Q, in easy access of the patient for manipulating the fan.

M M' M² are rods attached to the sides of the chair for the purpose of holding a rubber covering above the patient while being treated with steam or vapor, or it may be made to hold a mosquito-netting or analogous covering over the patient.

E' is an electrode, of metal or analogous conducting material, designed to apply electricity to the back of the patient, the other electrode (not shown) being held in the patient's hand or applied to any designed part of the body. This electrode E' is adjustable vertically in a slit S' in the back of the chair and lying between the air-cushions D' D². The electrode is held in position by a hand-rod F⁴ and nut N².

In Fig. 3 I have shown the means for holding the pivoted seat G² in position. V represents a locking-lever, pivoted to the frame of the chair so that its inner end when in the position shown in full lines locks the seat. It is manipulated by a rod U, accessible to the operator at the side of the chair, as shown.

N' N' is wire-netting, which constitutes the

body, seat, and leg-rest supports, thus making a light, strong, and efficient support.

3 3 are keys or links for uniting the leg-rests or supports, so that they will move as one part in vertical adjustment.

5 The box L is also adapted to receive the waste fluid from the syringe, which latter may be suspended from the hook O, said waste fluid dropping into the box through the opening or openings G³ in the seat.

10 The opening in the box L may also be covered by a perforated plate acting as an electrode, as shown by the dotted lines, Fig. 3, the perforations of said plate also admitting of the passage of any vapor that may be created within said box, this being possible by means of a spirit lamp, burner, or any other vaporizer placed in the box.

15 The patient may rest upon a sponge placed on the perforated plate for electrical treatment when so desired.

The heat from the box L may be employed for warming a sitz-bath placed on the seat over the opening or openings G³.

20 Owing to the open nature of the foot-rests II II', vapor may be passed through the same to the feet of the patient, said vapor being produced by any suitable apparatus, such as the steam-pipes employed for admitting steam within the inclosure. (Shown in dotted lines, Fig. 1.) Said rests may also support electrodes, if desired, so as to electrically treat the feet and limbs of the patient. (See the dotted lines on II II' at the bottom of Fig. 2.)

25 I am aware that it is not new to construct an invalid-chair with a seat-frame adapted to be raised or lowered; neither is it new to provide the same with an adjustable back-support; neither is it new to provide adjustable leg-rests, and such I do not claim, broadly; but I am not aware that it is old to provide a

chair of this character with the specific construction of parts, as herein set forth and claimed, the several parts constructed as shown making a chair both durable and economical and at the same time easily operated.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An invalid-chair having the frame A, with the upper side bars A', the seat-frame C C' D, consisting of the horizontal bars C and D and the connecting-bars C', pivoted to said horizontal bars and to the side bars A', the back-support D, with openings and secured to the lower portion of frame C C' D, and the link or rod E, pivotally secured to said frame C C' D and to the back-support D, said parts being combined substantially as described.

2. In an invalid-chair, the frame A, with cross-bar K, in combination with the pivoted frame C C' D, consisting of the horizontal bars C D and the pivoted connecting-bars C', the latter frame having the depending side bars C², with pins K', the separate leg-rests G G', each having a rack-bar pivoted thereto and adapted to engage with the pins K', and cross-bar K, substantially as and for the purpose set forth.

3. An invalid-chair having a stationary frame and a vertically-adjustable seat-frame, separate foot-rests, each having a sleeve pivoted on a cross-bar of the seat-frame, a link connecting said leg-rests, and fastening devices for said rests, said parts being combined substantially as and for the purpose set forth.

LINA M. HOFFMAN.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. JENNINGS.



(No Model.)

H. L. DULL.
ASH PAIL.

No. 417,816.

Patented Dec. 24, 1889.

Fig. 1.

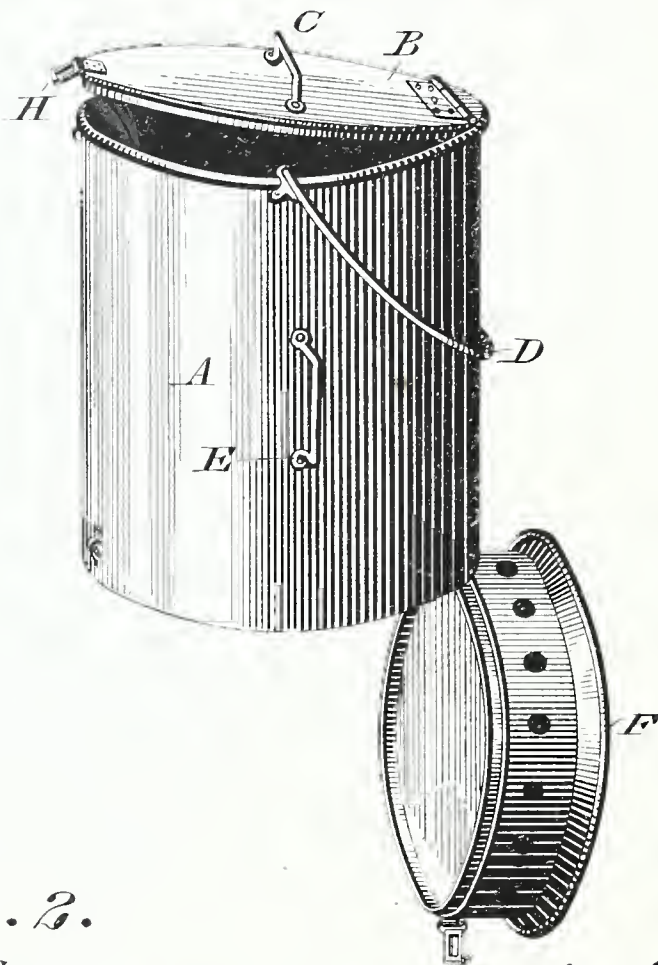


Fig. 2.

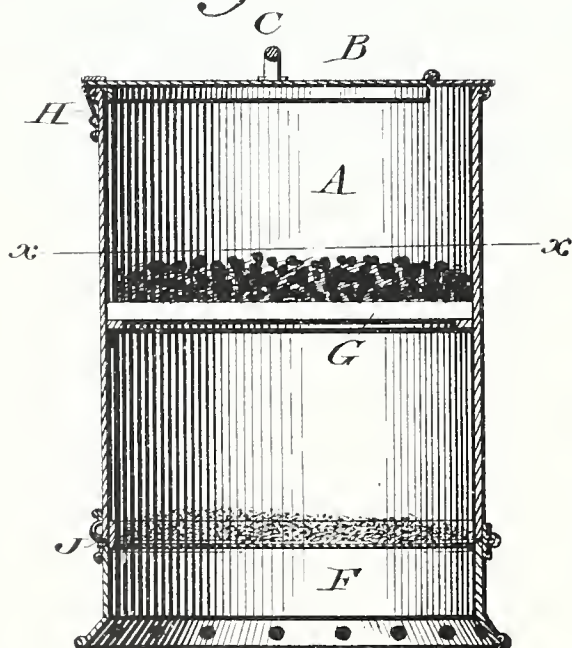
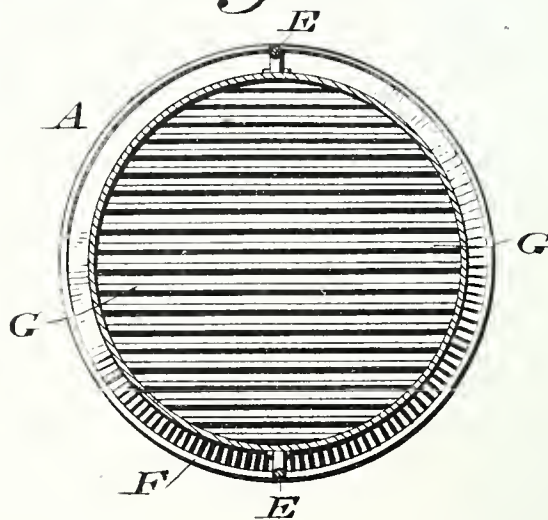


Fig. 3.



WITNESSES:

O. F. Nagle.
C. S. Byer

INVENTOR:

Hannah L. Dull.
BY *John A. Diederichsheim*
ATTORNEY.

UNITED STATES PATENT OFFICE.

HANNAH L. DULL, OF PHILADELPHIA, PENNSYLVANIA.

ASH-PAIL.

SPECIFICATION forming part of Letters Patent No. 417,816, dated December 24, 1889.

Application filed June 21, 1889. Serial No. 315,043. (No model.)

To all whom it may concern:

Be it known that I, HANNAH L. DULL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Ash Pails and Sifters or Screens, which improvement is fully set forth in the following specification and accompanying drawings.

10 My invention relates to improvements in ash pails and sifters; and it consists of the construction and combination of parts as herein set forth and claimed.

Figure 1 represents a perspective view of the device embodying my invention. Fig. 2 represents a transverse vertical section thereof. Fig. 3 represents a horizontal section thereof on the line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts in the three figures.

Referring to the drawings, A designates a pail or vessel, preferably formed of metal, and provided with a hinged lid B, having a handle C, a bail D, side grips E, a hinged bottom F, and an interiorly-arranged screen or grate G. The handle C is mounted at about the center of the lid, and the side grips are secured nearer the bottom of the body. The bottom F is hinged to one side of the lower edge of the body and provided with a perforated rim, which forms a base-rest, and also prevents the transmission of heat to the floor.

The screen or grate is located at a suitable elevation in the pail, and consists preferably of a series of parallel bars arranged at or about the same distance apart as the bars of a stove-grate, whereby the cinders and coal may be used directly from the pail without further manipulation.

The lid is raised by the handle C and the ashes are introduced into the pail, after which the said lid is closed and fastened by the catch H. The pail is now raised by the lower side grips E, and held in an upright position and reciprocated vertically or laterally. The ashes fall on the bottom F, after which said bottom is unfastened and drops to one side, as shown in Fig. 1, allowing discharge of the ashes from the pail. The bottom is afterward closed and secured by the catch J.

The cinders and coal may be removed at the top of the pail and the latter is ready for further use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An ash pail and sifter having a body with a grate therein, a hinged lid with a handle thereon, a hinged bottom forming an ash-receptacle and provided with a perforated rim, and side grips secured to said body, said parts being combined substantially as described.

2. An ash pail and sifter consisting of the body A, with a bail D and side grips E thereon, the latter secured on the sides thereof, the hinged lid B, with the handle C, the hinged bottom F, having a rim forming a base-rest, a grate within the body portion, and catches for securing said lid and bottom in closed position, said parts being combined substantially as described.

HANNAH L. DULL.

Witnesses:

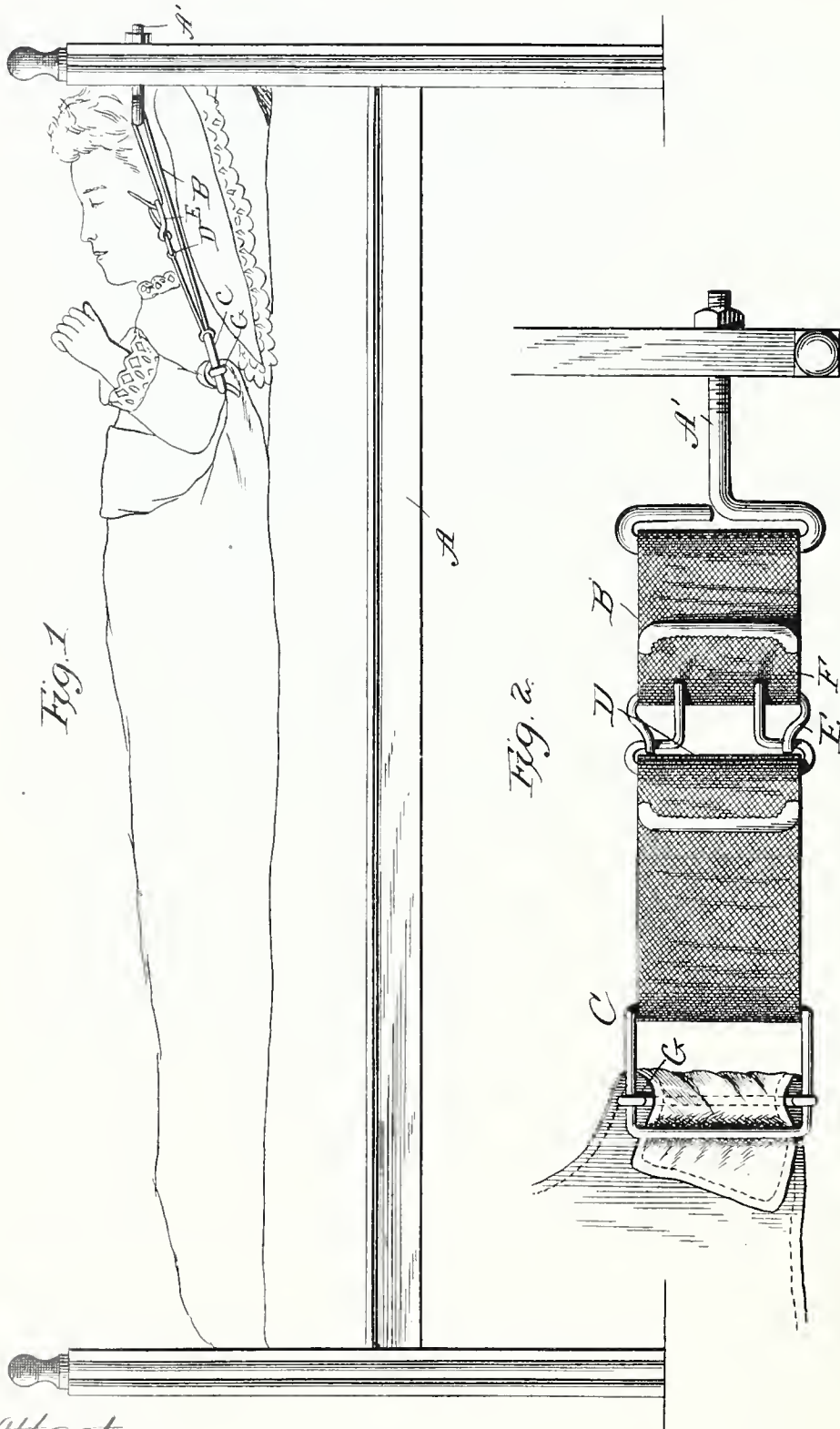
JOHN A. WIEDERSHEIM,
JAMES F. KELLY.

(No Model.)

E. J. WATRES.
BEDCLOTHES FASTENER.

No. 403,807.

Patented May 21 1889.



Attest
Walter Donaldson
Walter Greene.

Inventor:
Effie J. Watres,
by Uri Spar
Atty.

UNITED STATES PATENT OFFICE.

EFFIE J. WATRES, OF SCRANTON, PENNSYLVANIA.

BEDCLOTHES-FASTENER.

SPECIFICATION forming part of Letters Patent No. 403,807, dated May 21, 1889.

Application filed January 3, 1889. Serial No. 295,291. (No model.)

To all whom it may concern:

Be it known that I, EFFIE J. WATRES, of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented a new and useful Improvement in Bedclothes-Fasteners; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is an improved attachment for beds, cradles, and the like, by means of which the bedclothing may be held from displacement under the restlessness of the sleeper or patient without producing any irritation or binding effect and without tearing the bedclothing.

I am aware that it has been suggested heretofore to provide means for retaining the bedclothing in place by clamps secured to the side-boards of the bed, with flexible connections between these clamps and the clothing; but this arrangement is more or less objectionable, for the reason that it requires an expensive and complicated form of clamp for connection to the side of the bed, which would be unsightly and which would mar and scratch the bed, and, further, it has a binding effect upon the bedclothes across the sleeper or patient and would tear the bedclothing with even a slight strain or pressure.

It is the object of my invention to obviate these difficulties, to provide simple means which can readily be applied by any unskilled person and adapted to hold the bedclothes at their upper edges upon each side of the patient or sleeper, so that while the clothes are securely held and prevented from slipping off the patient or bed no binding effect is produced, and the sleeper or patient has free movement beneath the clothes without in any way effecting their position on the bed or tearing them.

In the accompanying drawings, Figure 1 represents a side view of the bedstead, through which a bolt passes. Fig. 2 is a view of the attachment, looking directly down upon it, with only a portion of the head-board represented through which the bolt passes.

In the drawings, the bedstead is represented at A, and this may represent any form of bedstead, cradle, crib, or the like. Upon each side of the head-board of the bedstead, near

the pillows, or on a level with the bedclothes, I form a hole, through which I pass the threaded shank of a bolt, A', which is provided with an elongated loop on its front end. Suitable nuts fit the threaded ends of the bolts and hold them adjustably in position on the head-board.

From the looped ends of the bolt A', I extend elastic straps B, which pass through the loop and fastener C, the elastic being double, as shown. The end D of the elastic is provided with an ordinary buckle, E, and the end F of the elastic is adapted to be held by said buckle and to be adjusted therein, so as to increase or diminish the length of the elastic. The fastener C consists simply of a rectangular frame having a cross-bar, G, fitted loosely to slide on the two end wires of the fastener-frame, and this provides a very simple means for holding the bedclothes by first drawing the upper corners or edge of the clothes through the space I, between the cross-bar and the rear of the frame, and then doubling them back and passing through on the other side between it and the front of the frame, and this has the effect of binding the clothes in place between the cross-bar and the front of the frame.

It will be understood that the connection upon the opposite side is precisely the same, and that this not only tends to hold the clothes securely, but the elastic connection allows any slight movement of the clothes, and my improved attachment does not in any way mar the appearance of the bed or tear the bedclothing.

What I claim is—

In combination, the head-board, the looped bolt secured thereto, the rectangular frame C, having the fastening-bar G, and a flexible strap, B, passing through the looped bolt and the rectangular frame, the free ends of the strap being connected by an adjustable connection, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EFFIE J. WATRES.

Witnesses:

HENRY A. KNAPP,
S. E. HAWLEY.

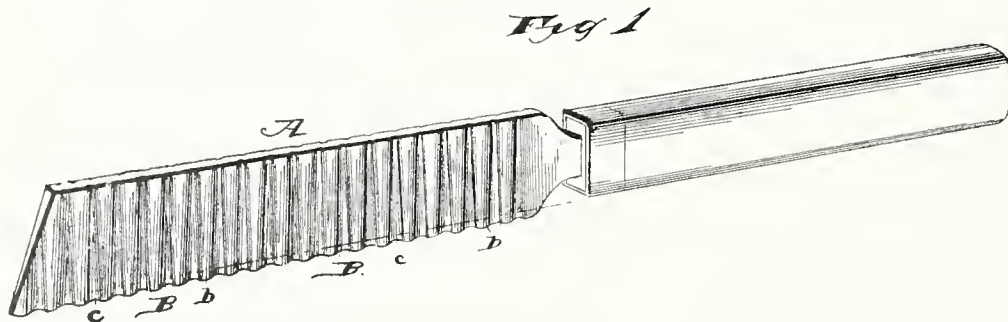
(No Model.)

A. L. CLARK.

KNIFE BLADE.

No. 397,692.

Patented Feb. 12, 1889.



Witnesses,

Geo. H. Doyle
C. E. Doyle

Inventor,

A. L. Clark
by *C. H. Snow & Co*
Attorneys.

UNITED STATES PATENT OFFICE.

ABBIE LUCIE CLARK, OF EASTON, PENNSYLVANIA.

KNIFE-BLADE.

SPECIFICATION forming part of Letters Patent No. 397,692, dated February 12, 1889.

Application filed October 28, 1887. Serial No. 253,640. (No model.)

To all whom it may concern:

Be it known that I, ABBIE LUCIE CLARK, residing at Easton, in the county of Northampton and State of Pennsylvania, have invented new and useful Improvements in Knife-Blades, of which the following is a specification.

My invention relates to improvements in knife-blades adapted for use in slicing vegetables, &c.; and it consists in forming the blade with a series of corrugations or flutes, whereby the slices of a vegetable formed by the knife are corrugated.

One advantage of this construction is that the exposed surface of a slice thus made is much greater than when the slice is made with an ordinary straight blade, and consequently the vegetable will cook more thoroughly. Further, the appearance of a slice of vegetable thus formed is ornamental.

It will be understood that when a slice is made with a knife of this character the blade must be passed straight through the vegetable without drawing or pushing.

This invention is more fully described in connection with the accompanying drawings, wherein—

Figure 1 is a perspective view of a knife made in accordance with my invention. Fig. 2 is a longitudinal section of the blade.

Referring to the drawings, A designates the blade, which is formed with a series of narrow corrugations or flutes, B B, comprising the alternate ribs *b* and grooves *c*. These ribs and grooves are rounded evenly, so that the blade from one end to the other comprises a succession of regular curves or waves. The ribs on one side of the blade correspond to the grooves on the other side, thus enabling the cutting-edge of the blade to be of an equal thickness throughout its length.

The corrugations may be extended up to the back of the blade, so as to make the latter similar in appearance to the edge, with the exception that it is thicker; or the corrugations may be tapered off toward the back, so as to render the outline of the latter straight, or nearly so, as seen in Fig. 1.

This knife will be found of great utility as a vegetable-slicer, and this is the purpose for which it is particularly adapted; but I do not wish it to be understood that the application of the corrugated edge to knives is only of advantage in connection with hand-knives, as all kinds of mechanical slices may be provided with knives of this construction.

The knife-blade by having the corrugations on one side decreasing in width toward the edge will have those on the opposite side increasing in width thereto, so that the edge will have a series of larger and smaller bends that will alternate with each other.

Having thus described my invention, I claim—

The herein-described knife having a fixed handle and a blade provided with a series of transverse corrugations extended from top to bottom throughout, causing the edge to have a larger and smaller series of curves on each side, respectively, the members of one of which series alternate with those of the other, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ABBIE LUCIE CLARK.

Witnesses:

JOHN STOLZER,

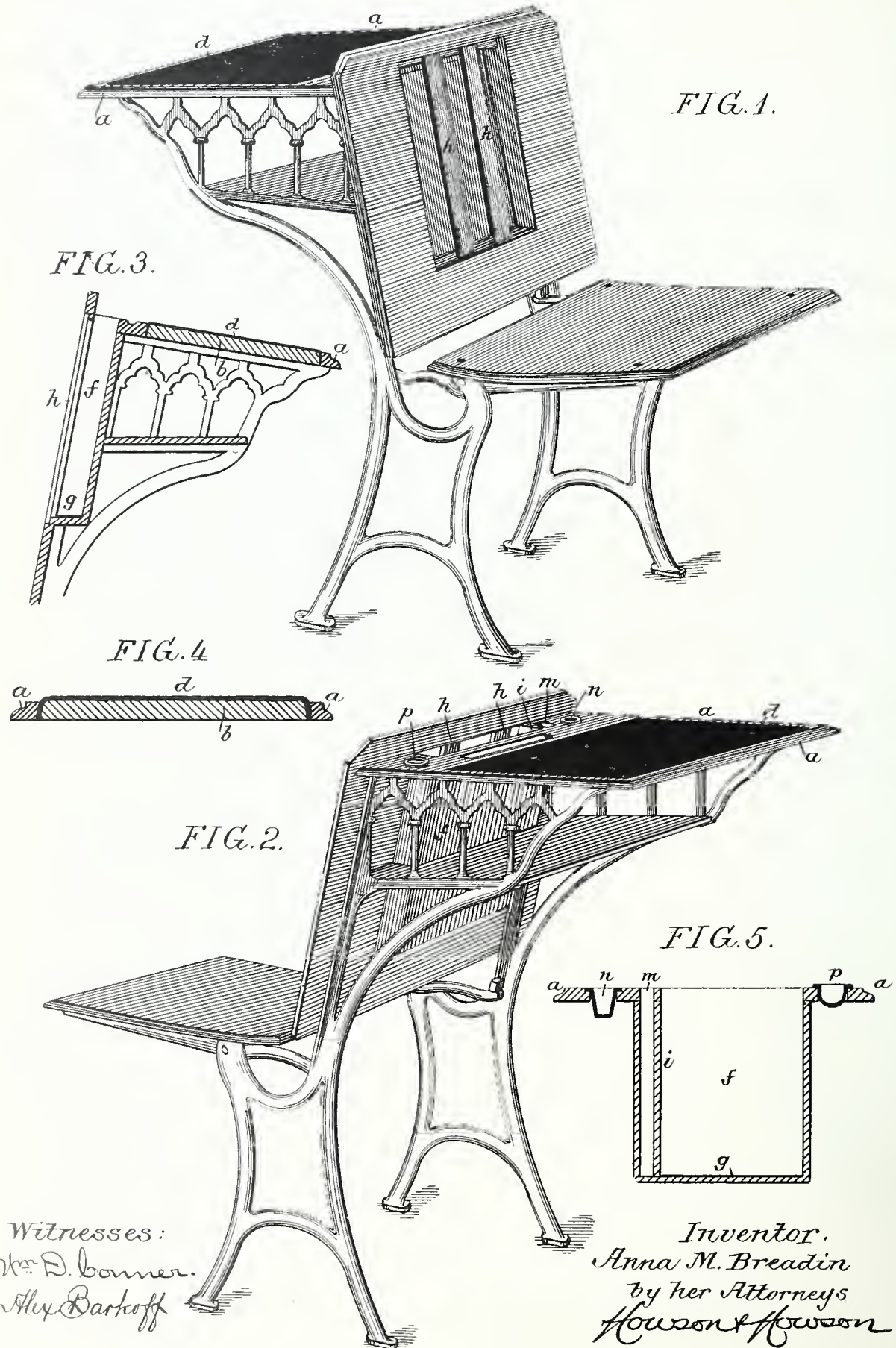
JOS. LIGHTCAP.

(No Model.)

A. M. BREADIN.
SCHOOL DESK.

No. 400,738.

Patented Apr. 2, 1889.



UNITED STATES PATENT OFFICE.

ANNA M. BREADIN, OF PHILADELPHIA, PENNSYLVANIA.

SCHOOL-DESK.

SPECIFICATION forming part of Letters Patent No. 400,738, dated April 2, 1889.

Application filed December 14, 1888. Serial No. 293,553. (No model.)

To all whom it may concern:

Be it known that I, ANNA M. BREADIN, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented
5 certain Improvements in School-Desks, of which the following is a specification.

One object of my invention is to so construct a school-desk as to prevent or lessen to
10 a great extent the noise caused by the slamming of slates or books upon the desks, or the dropping of the slates into the slate-wells with which school-desks are usually provided, a further object being to so construct the
15 slate-well that it is always open to inspection, and can be readily kept clean. These objects I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figures 1 and 2 are perspective views in
20 different positions of a school-desk constructed in accordance with my invention. Fig. 3 is a transverse section of part of the desk. Fig. 4 is a longitudinal section of the top of the desk; and Fig. 5 is a transverse section
25 through the slate-well.

The top of the desk consists of an outer portion or narrow frame, *a*, inclosing and retaining a central panel, *b*, covered with sheet-rubber *d*, the latter passing down over the
30 sides and ends of the panel, and being confined between the same and the outer frame, *a*, of the top of the desk, so that when the panel and its rubber cover are in place no edges of said cover are exposed, and the cover
35 cannot, therefore, be torn or loosened by mischievous scholars, as would be likely if the edges of the covering were exposed. The rubber covering *d* projects above the surface of the outer confining-frame, *a*, so as to prevent
40 contact with said frame of objects deposited upon the top of the desk.

At the front of the desk is a slate well or receptacle, *f*, the bottom of which is likewise clothed with rubber, as at *g*, so that the noise
45 which usually accompanies the throwing of books or slates down on an ordinary desk, or the dropping of the slates into the slate-wells, is effectually prevented and the desk is rendered

practically noiseless. The rubber covering of the desk, moreover, can be readily washed
50 and kept clean, and it affords such a firm frictional hold for a slate that the latter is not liable to slip and slide about over the surface of the desk under the hands of a restless or nervous scholar.

The inner portion of the casing of the slate-well—that is to say, the portion accessible to the occupant of the desk—is preferably closed,
55 as shown in Figs. 2 and 3, the front of the desk having an opening in front of the well, and this opening being crossed by slats *h*, so that while the occupant of the desk cannot gain access to the lower portion of the slate-well, for the purpose of hiding or depositing
60 objects therein, the interior of the slate-well is accessible at all times for cleansing purposes, and is open to the inspection of a teacher passing along an aisle between the rows of
65 desks.

The slate-well has near one end a partition,
70 *i*, which serves to form at the end of the well a pocket, *m*, for the reception of a ruler, and the top of the desk has at one side an opening for an ink-well, *n*, and at the opposite side an opening for the reception of a sponge-
75 cup, *p*.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. The combination, in a school-desk top, of the outer border or frame, the panel within
80 the same, and the rubber covering having a surface higher than the surface of the frame and having its edges confined between the panel and said frame, all substantially as specified.

2. A school-desk having a slate-well with closed internal casing, and an open front with cross-slats forming the front of the well, substantially as specified.

In testimony whereof I have signed my name
90 to this specification in the presence of two subscribing witnesses.

ANNA M. BREADIN.

Witnesses:

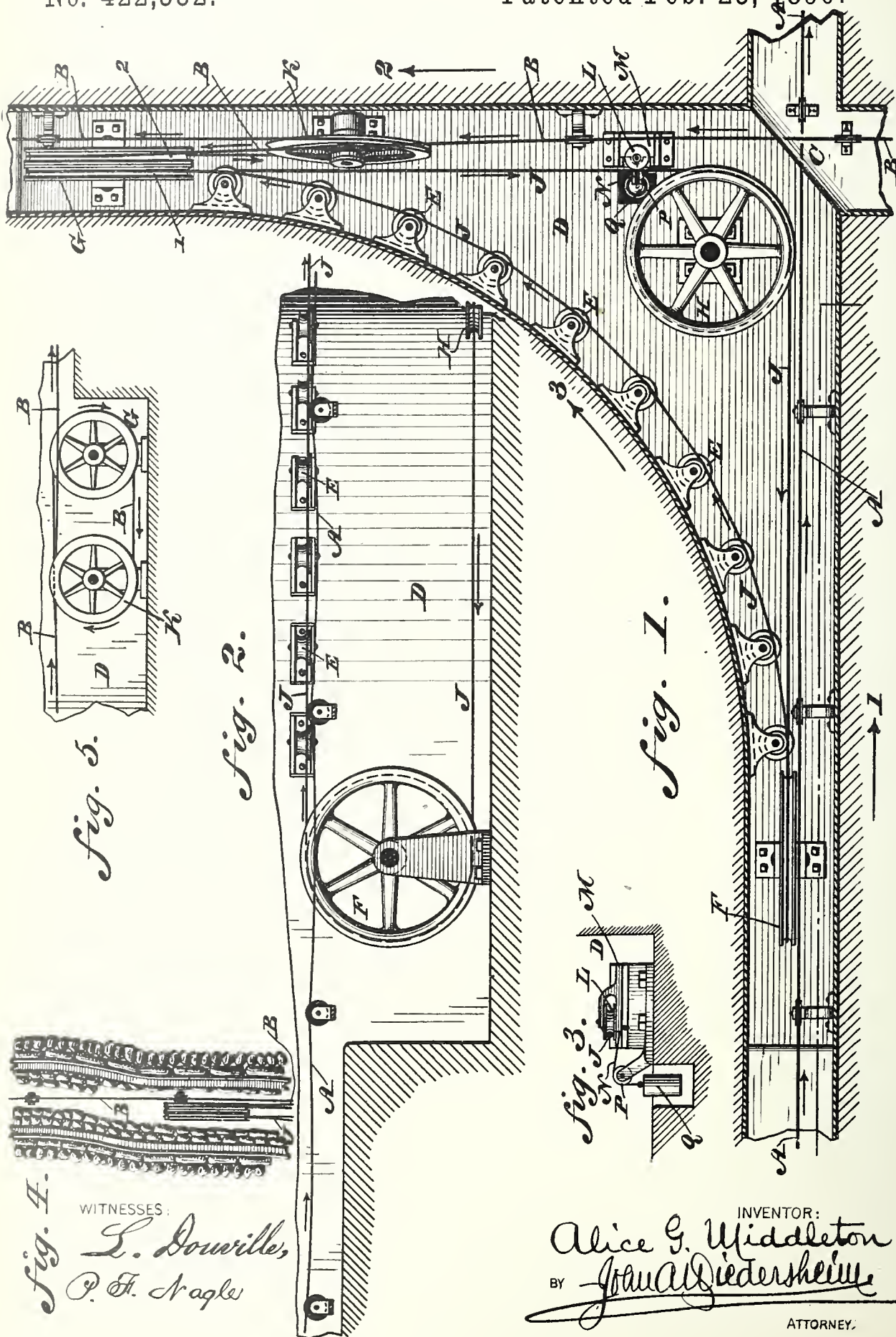
WILLIAM D. CONNER,
HARRY SMITH.

(No Model.)

A. G. MIDDLETON.
TRANSFER APPARATUS FOR TRACTION CABLE CARS.

No. 422,352.

Patented Feb. 25, 1890.



WITNESSES:

fig. 4.
L. Douville,
P. F. Nagle

INVENTOR:
Alice G. Middleton
BY *J. A. Giedersheim*
ATTORNEY,

UNITED STATES PATENT OFFICE.

ALICE G. MIDDLETON, OF PHILADELPHIA, PENNSYLVANIA.

TRANSFER APPARATUS FOR TRACTION-CABLE CARS.

SPECIFICATION forming part of Letters Patent No. 422,352, dated February 25, 1890.

Application filed May 9, 1889. Serial No. 310,108. (No model.)

To all whom it may concern:

Be it known that I, ALICE G. MIDDLETON, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Transfer Apparatus for Traction-Cable Cars, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of apparatus for transferring or switching cable cars from one track to a crossing track, the several features of the invention being hereinafter fully set forth, and pointed out in the claim, the essential feature of the invention being the provision of an auxiliary cable adjacent to the crossing and the operation of the same by the main or crossing cable.

Figure 1 represents a top or plan view of a transfer apparatus for traction-cables embodying my invention. Fig. 2 represents a side elevation of a portion thereof. Fig. 3 represents a side elevation of another detached portion. Fig. 4 represents a top or plan view of a portion on a reduced scale. Fig. 5 represents a side elevation on a reduced scale.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A and B designate traction-cables which cross each other, as at C.

D designates a trench, which is formed adjacent to the crossing and extends in the directions of the two cables A and B. Within the trench are mounted a number of grooved rollers E, whose axes are vertical and properly supported, said rollers being arranged in a curvilinear direction or row. Near one end of said row of rollers is mounted a grooved pulley F, and near the other end is mounted a grooved pulley G, both pulleys being substantially tangential to said row of rollers and having horizontal axes, the pulley G being formed with two grooves 1 2 in its periphery, or in lieu thereof two grooved pulleys may be employed, the same being placed side by side on the same axis or shaft.

In the trench near the crossing C is a grooved pulley H, having a vertical axis, it being noticed that said pulley occupies the

angle of the trench, while the pulleys F G occupy the ends thereof.

J designates an endless auxiliary cable, the same passing around the pulley F against the rollers E, and around the pulley G in the groove 1 thereof and around the pulley H, it being seen that the pulley F is parallel or approximately parallel with the cable A, and the pulley G is parallel or approximately parallel with the cable B.

Mounted in the trench between the crossing C and the pulley G is a grooved pulley K, whose axis is slightly inclined, so that the cable can readily pass around the pulleys G and K without its parts coming in contact and rubbing on each other, or being strained or bent, said pulley being so located that the cable B passes the same, after which it is run around the pulley G in the groove 2 thereof, and then returned and run around the pulley K, by which provision the cable B communicates motion to the pulley G, the effect of which is the operation of the auxiliary cable.

When a car is running on the cable A in the direction of arrow 1, and it is desired to transfer the same to the cable B, running in the direction of arrow 2, the grip is released as the car approaches the pulley F, and the momentum of the car carries it over the switch of the turn-off track at this point. When the grip is again closed, it then engages with the auxiliary cable J, so that the car is drawn by the latter in the direction of the arrow 3. The grip is released as it approaches the pulley G, and after it passes the same it is engaged with the cable B, so that the car is propelled in the direction of the arrow 2.

It is evident that the apparatus may be adapted to transfer the car from the track over the cable B to that over the cable A, and likewise located at any angle of a crossing, according to requirements.

As the cable J may become loose and thus drop or slip, it is important to obviate the same. For this purpose I employ a horizontal roller L, which is fitted to a slide M, mounted in any suitable part of the trench. Connected with said slide is a cord or chain N, which passes over a pulley P, and having at its lower end a weight Q, whereby the roller L is pressed against the cable, so that the

latter has its slack taken up and it is kept in proper taut condition, it being evident that a spring may be employed to bear against the roller L in lieu of the weight Q.

5 I am aware that it is not new to combine with cross-cables a transfer-cable having motion communicated to it by means of one of said cross-cables, and such I do not claim; but I am not aware that the specific construction herein set forth and claimed is old, wherein one of the wheels of the operating mechanism of the transfer-cable is provided with two grooves, around and in one of which is passed a cross-cable, which is then passed
10 around a pulley in the line of the said cross-cable. Neither is the device herein shown for the automatic adjustment of the transfer-cable thought to be common, the said device being automatic at all times in its action.

20 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the cross-cables A and B, the curvilinear row of pulleys E, having

vertical axes, the pulleys F and G on horizontal axes, the said pulley G having grooves 1 and 2, the pulley H on a vertical axis, an endless auxiliary cable J, passing around the pulley F against the rollers E and around groove 1 of pulley G and around the pulley H back to pulley F, an inclined grooved pulley K, passed by the cable B, which encircles groove 2 of pulley G, and then returns backward to encircle pulley K to operate the auxiliary cable J, and a tension device for said cable J, consisting of a slide M, fitted with a horizontal roller L, said slide having a cord or chain N attached thereto, which passes over a pulley P and has a weight Q at its lower end, whereby the roller L is pressed against the cable J, so that the latter has its slack taken up and is kept in proper taut condition, substantially as described.

ALICE G. MIDDLETON.

Witnesses:

A. P. JENNINGS,
L. JENNINGS.

(No Model.)

M. BLAKEY.
WELDING SEAMS OF PIPES.

No. 433,591.

Patented Aug. 5, 1890.

FIG. 1.

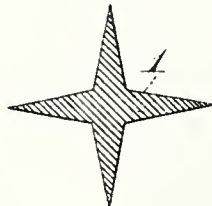


FIG. 2.

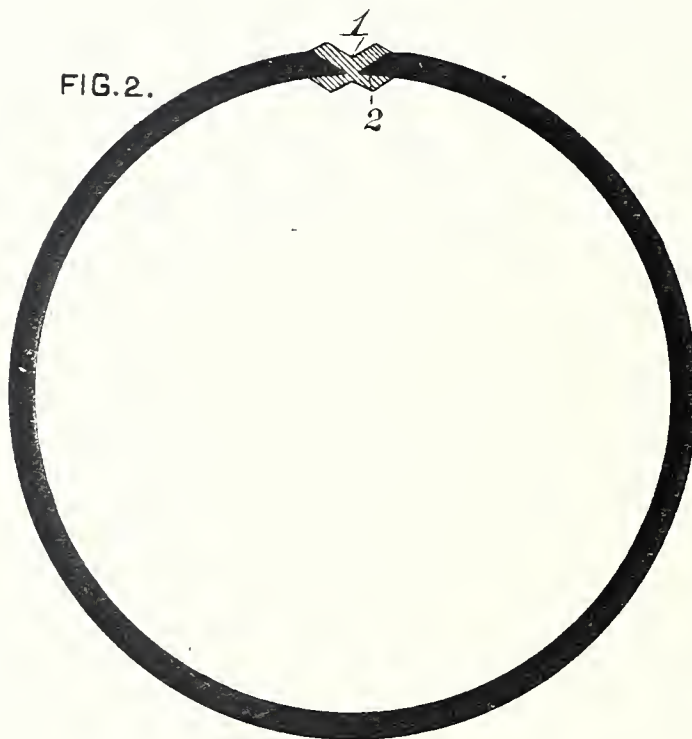
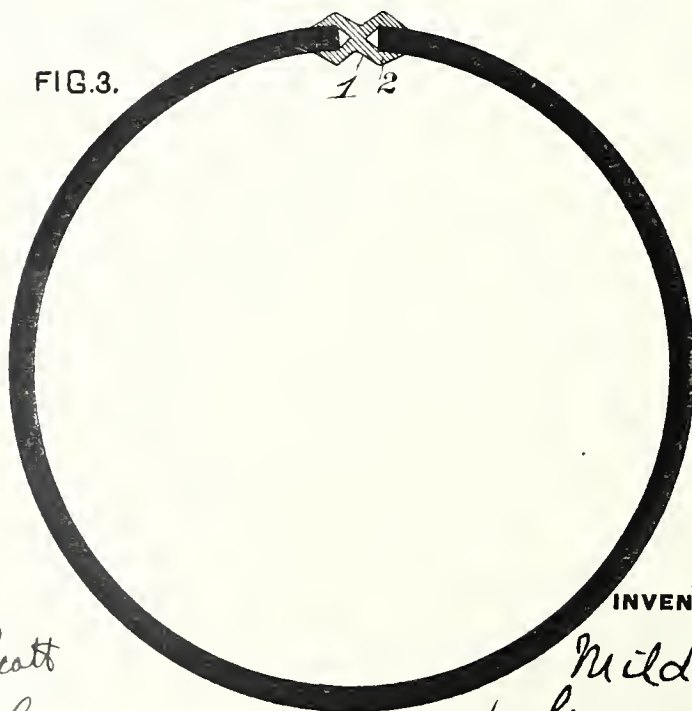


FIG. 3.



WITNESSES:

Danway S. Wolcott
F. O. Gaither.

INVENTOR,

Mildred Blakey
by George H. Christy
Atty.

UNITED STATES PATENT OFFICE.

MILDRED BLAKEY, OF PITTSBURG, PENNSYLVANIA.

WELDING SEAMS OF PIPES.

SPECIFICATION forming part of Letters Patent No. 433,591, dated August 5, 1890.

Application filed May 1, 1890. Serial No. 350,147. (No model.)

To all whom it may concern:

Be it known that I, MILDRED BLAKEY, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Welding Pipes, of which improvements the following is a specification.

The invention described herein relates to certain improvements in the manufacture of wrought iron or steel pipes or tubes, which, in accordance with the present practice, are formed by bending a strip of metal, or, as it is known, a "skelp," longitudinally into tubular form, and then welding the adjacent longitudinal edges. These edges are joined either by a butt-weld or by a lap-weld. The former is preferable when uniformity in the thickness of the walls of the pipe is desired, but is objectionable on account of the difficulty of making a good weld. The lap-weld is preferable as insuring a good weld, but is objectionable for the reason that the edges are liable to lap over too far, and hence the metal is stretched in forcing the ball through during the welding process, and thereby reducing the walls in thickness.

The object of this invention is to combine the desirable features of both methods of forming pipes and avoid the objectionable characteristics; and the invention consists in uniting the edges of the skelp by a welding key or strip, as will be hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a sectional elevation of my improved welding key or strip as it comes from the rolls. Fig. 2 is a sectional view of a skelp having scarfed or beveled edges, showing the arrangement of the welding-key between its edges; and Fig. 3 is a similar view, the skelp having square or unbeveled edges.

In the practice of my invention the strip or skelp is formed in the usual manner, except that it is made a little narrower to allow for the interposition of the welding key or strip 1, as will be hereinafter described. This welding key or strip is preferably formed by rolling a bar or billet between rolls having

grooves or passes suitably constructed according to rules well known in the art, for the reduction of the bar or billet to a strip star-shaped in cross-section, as shown in Fig. 1. The points or spurs can be closed or bent toward each other in pairs by passing the star-shaped bars between suitable rolls, thereby forming grooves on opposite sides of the bar, as shown in Figs. 2 and 3, for the reception of the edges of the skelps. The strip or key thus formed may be slid between the edges of the skelp after it is bent into tubular form, or, and as I prefer, the strip is held in such relation to the skelp-bending machine that the edges of the skelp may enter and slide along the grooves 2 of the strip or key as the skelp is drawn through the machine. After the skelp and key are adjusted together, as described, they are placed in a suitable furnace and heated to the proper temperature and then welded together in the manner usual in lap-welding.

Care should be taken in forming the skelps and the welding-key, as regards the width of each, that the finished pipe shall be of the standard internal diameter, and that the welding-key should be so proportioned as regards its cross-sectional area that it can be reduced in the welding operation to the same thickness as the wall of the pipe. It is obvious that the key 1 will effectually prevent any change during the heating of the skelp as will render necessary any stretching of the metal during the welding operation, and that therefore a uniformity of thickness of the pipe-walls incident to the ordinary butt-weld can be attained in connection with the superiority of weld inherent in the present lap-weld practice. The edges of the skelp may be scarfed, as shown in Fig. 2, or cut square, as shown in Fig. 3.

I am aware that pipe have been formed by bending the projecting arms of an H-section strip of metal down behind flanges formed along the edges of sheets or plates, as described in English Letters Patent No. 2,157 of 1883. In this construction the locking-strip engages ribs along the interior and exterior surface of the pipe, and cannot be reduced to a thickness uniform with that of the

metal sheet or plate, whereas in my construction the thickness of the pipe-wall is approximately uniform throughout.

5 In the practice of my invention the skelp employed does not differ materially as regards construction from the skelp as ordinarily made.

I claim herein as my invention—

10 1. In the manufacture of wrought-iron pipes and tubes of substantially uniform thickness along the joints as elsewhere, a welding key or strip approximately of the thickness of the skelp to which it is to be applied and having a groove in each edge thereof, in combination with a practically plain-edged skelp,
15 whereby a welding-pass will produce the de-

sired uniform thickness, substantially as set forth.

2. A welding key or strip having a groove along each edge for the reception of a practically plain-edged skelp, and approximating in thickness the skelp to which it is to be applied with reference to its reduction in the welding operation to the same thickness as the skelp, substantially as set forth. 20 25

In testimony whereof I have hereunto set my hand.

MILDRED BLAKEY.

Witnesses:

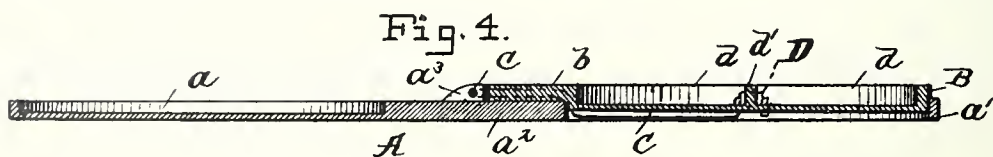
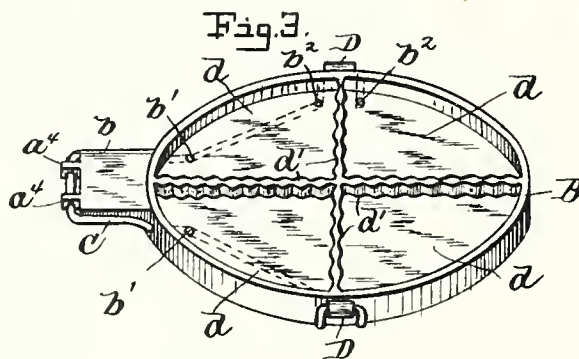
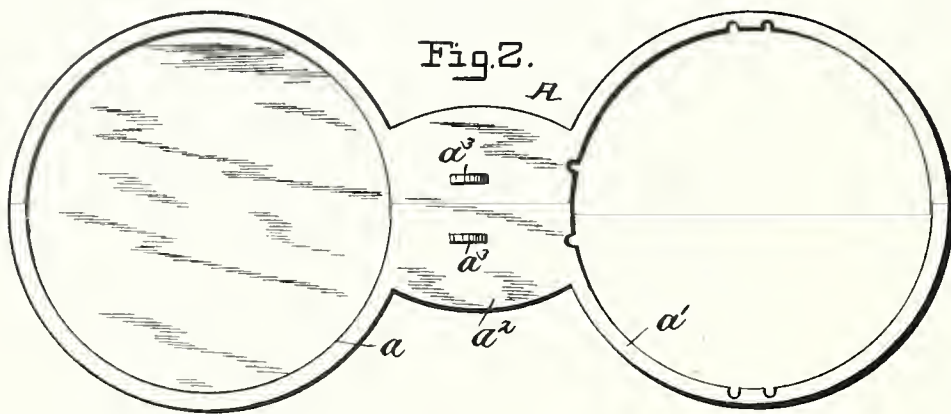
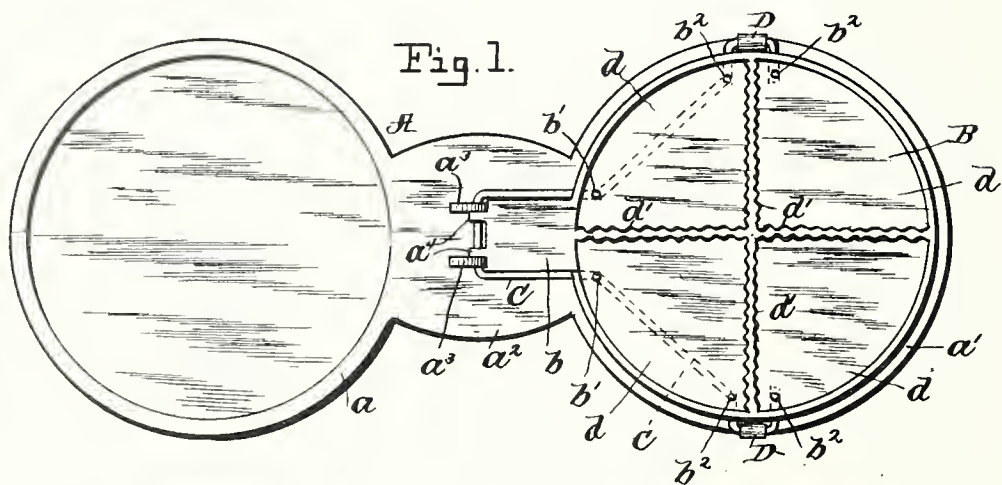
W. B. CORWIN,
DARWIN S. WOLCOTT.

(No Model.)

A. JACOBY.
GRIDDLE.

No. 434,788.

Patented Aug. 19, 1890.



Witnesses.

Wm. S. Hodges
Geo. W. Smith

Inventor.

Augusta Jacoby
By *Patrick O. Lench*
Attorney

UNITED STATES PATENT OFFICE.

AUGUSTA JACOBY, OF LANGHORNE, PENNSYLVANIA.

GRIDDLE.

SPECIFICATION forming part of Letters Patent No. 434,788, dated August 19, 1890.

Application filed May 12, 1890. Serial No. 351,426. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTA JACOBY, a citizen of the United States of America, residing at Langhorne, in the county of Bucks and State of Pennsylvania, have invented certain new and useful Improvements in Griddles, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention pertains to certain new and useful improvements in griddles, having for its object the production of a cheap, simple, and highly-efficient device of this class for gas or gasoline stoves.

15 The invention comprises a rigid section and a movable or pivoted section designed to fit in a frame of said rigid section and to close down over a pan formed by the other half thereof, the connection between said rigid and 20 movable sections being effected by a continuous wire passed through coincident lugs and having handles connected to its ends, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

25 In the accompanying drawings, Figure 1 is a plan view of my improved griddle. Fig. 2 is a similar view with the movable section removed. Fig. 3 is a perspective view of said latter section. Fig. 4 is a central longitudinal 30 view of the entirety.

Referring to the drawings, A designates the rigid section, which consists of a circular chambered ring or pan *a* and a skeleton ring or frame *a'*. The pan *a* and frame *a'* are 35 connected to or formed with a central head or connecting-neck *a²*, from the upper surface of which project two parallel apertured lugs *a³*.

40 B is a movable section, consisting of a chambered ring or pan having a short plate *b*, from which extend two parallel apertured lugs *a⁴*. The apertures of the lugs *a³* *a⁴* are designed to coincide, and through them is passed a stiff wire C, which effects the hinging connec-

tion between the parts. This wire C is secured 45 to the under side of section B by rivets *b'*, and its ends are passed through apertures of section B, and rounded handles D located on opposite sides of said section. The wire is secured by rivets *b²* *b²*, adjacent each handle, 50 so as to hold the latter in place.

The pan or movable section B is preferably divided into four separate chambers or compartments *d*, separated by intersecting flanges 55 *d'*, having fluted surfaces.

In practice the pan or section B is placed 60 within the ring or frame *a'*, and after the batter placed in its compartment is sufficiently cooked on one side said section is turned on its hinges and its contents are transferred to 65 pan *a*, with pan B bearing thereon. In this manner the batter is thoroughly cooked on both sides, and the transferring of the cakes from one pan to the other is readily and easily accomplished.

I claim as my invention—

1. A griddle for gas or gasoline stoves, consisting of a stationary ring or circular pan, apertured lugs, and the movable section or 70 pan having lugs coincident with said former lugs, and the wire passed through the apertures of said lugs, and the handle secured by said wire, substantially as set forth.

2. A griddle for gas or gasoline stoves, consisting of a rigid section having a chambered 75 ring or pan, a ring or skeleton frame, a connecting-neck having apertured lugs, a movable section or chambered pan having apertured lugs, the wire passed through the coincident apertures of said lugs, and the handles 80 held by said wire, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

AUGUSTA JACOBY.

Witnesses:

OSCAR JACOBY,

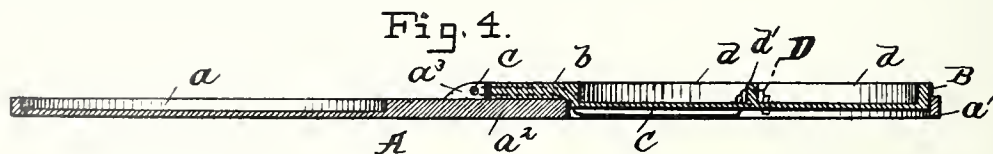
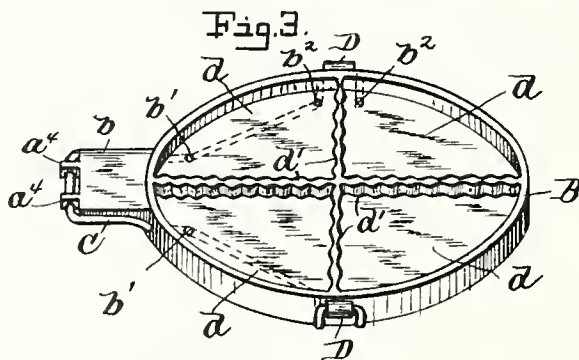
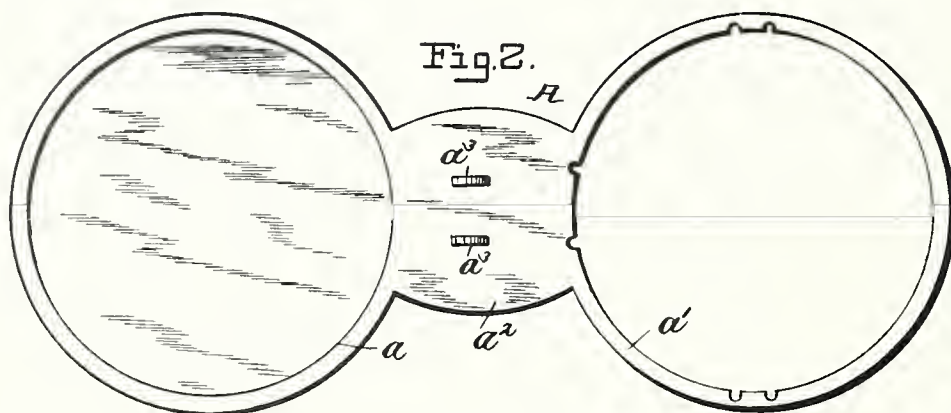
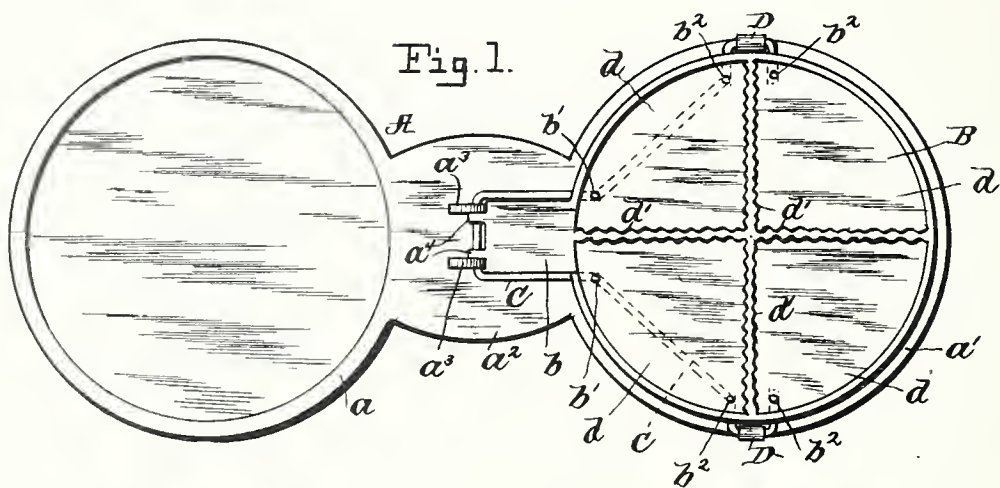
C. W. UEBELHOAR.

(No Model.)

A. JACOBY.
GRIDDLE.

No. 434,788.

Patented Aug. 19, 1890.



Witnesses.

Wm. S. Hodges.
Geo. W. Smith

Inventor.

By Augusta Jacoby
Patrick O'Leary
Attorney

UNITED STATES PATENT OFFICE.

AUGUSTA JACOBY, OF LANGHORNE, PENNSYLVANIA.

GRIDDLE.

SPECIFICATION forming part of Letters Patent No. 434,788, dated August 19, 1890.

Application filed May 12, 1890. Serial No. 351,426. (No model.)

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10 This invention pertains to certain new and useful improvements in griddles, having for its object the production of a cheap, simple, and highly-efficient device of this class for gas or gasoline stoves.

15 The invention comprises a rigid section and a movable or pivoted section designed to fit in a frame of said rigid section and to close down over a pan formed by the other half thereof, the connection between said rigid and 20 movable sections being effected by a continuous wire passed through coincident lugs and having handles connected to its ends, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

25 In the accompanying drawings, Figure 1 is a plan view of my improved griddle. Fig. 2 is a similar view with the movable section removed. Fig. 3 is a perspective view of said latter section. Fig. 4 is a central longitudinal 30 view of the entirety.

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tion between the parts. This wire C is secured 45 to the under side of section B by rivets *b'*, and its ends are passed through apertures of section B, and rounded handles D located on opposite sides of said section. The wire is secured by rivets *b²* *b²*, adjacent each handle, 50 so as to hold the latter in place.

The pan or movable section B is preferably divided into four separate chambers or compartments *d*, separated by intersecting flanges *d'*, having fluted surfaces. 55

In practice the pan or section B is placed within the ring or frame *a'*, and after the batter placed in its compartment is sufficiently 60 cooked on one side said section is turned on its hinges and its contents are transferred to pan *a*, with pan B bearing thereon. In this manner the batter is thoroughly cooked on both sides, and the transferring of the cakes 65 from one pan to the other is readily and easily accomplished.

I claim as my invention—

1. A griddle for gas or gasoline stoves, consisting of a stationary ring or circular pan, apertured lugs, and the movable section or 70 pan having lugs coincident with said former lugs, and the wire passed through the apertures of said lugs, and the handle secured by said wire, substantially as set forth.

2. A griddle for gas or gasoline stoves, consisting of a rigid section having a chambered 75 ring or pan, a ring or skeleton frame, a connecting-neck having apertured lugs, a movable section or chambered pan having apertured lugs, the wire passed through the coincident apertures of said lugs, and the handles 80 held by said wire, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

AUGUSTA JACOBY.

Witnesses:

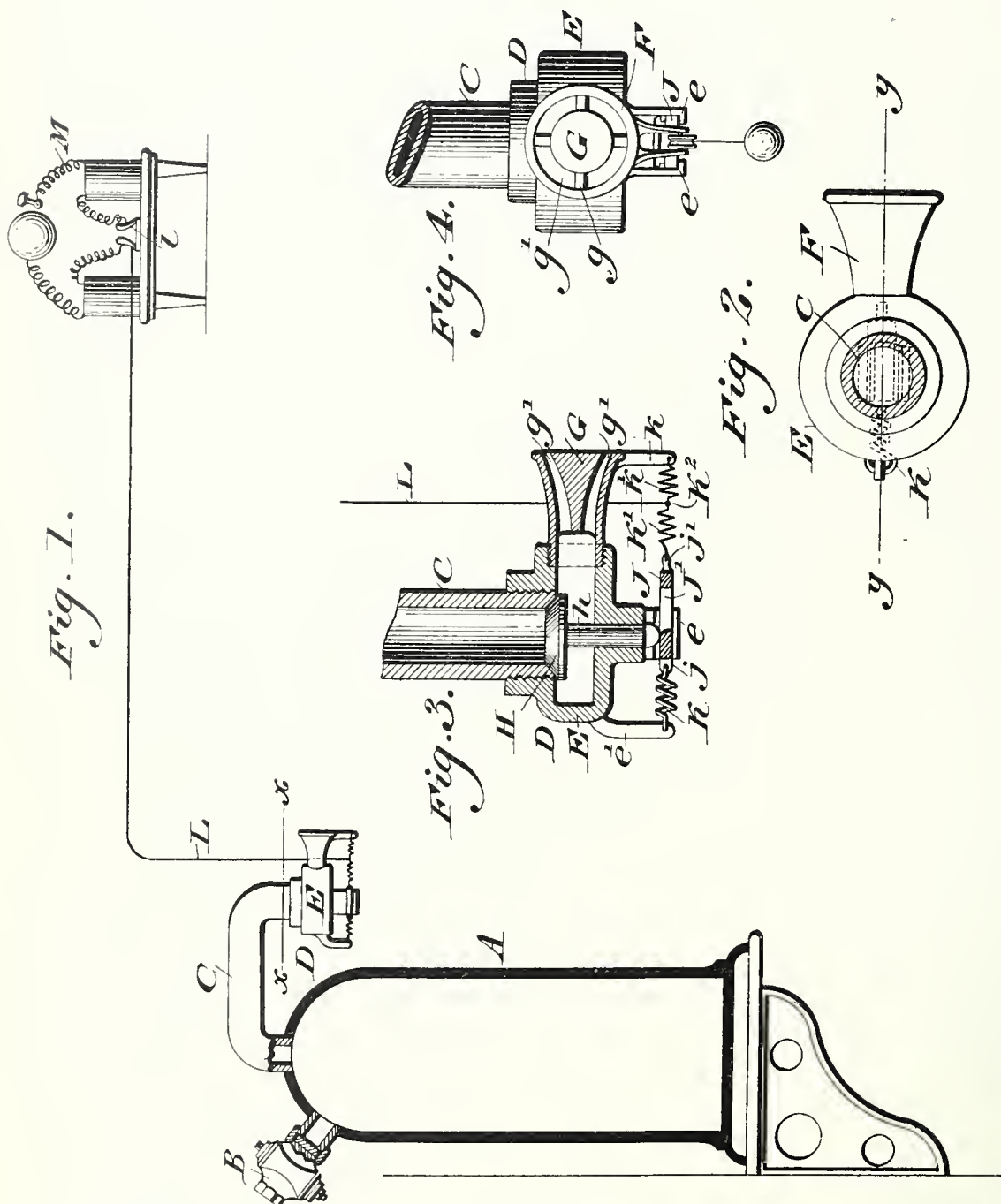
OSCAR JACOBY,
C. W. UEBELHOAR.

(No Model.)

E. R. & J. R. MOORE.
FIRE EXTINGUISHING APPARATUS.

No. 435,316.

Patented Aug. 26, 1890.



WITNESSES:

P. F. Chagles.
L. Douville

INVENTORS.
Emma R. Moore
John R. Moore
BY John A. Gieseler
ATTORNEY.

UNITED STATES PATENT OFFICE.

EMMA R. MOORE AND JOHN R. MOORE, OF PHILADELPHIA, PENNSYLVANIA.

FIRE-EXTINGUISHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 435,316, dated August 26, 1890.

Application filed November 11, 1889. Serial No. 329,964. (No model.)

To all whom it may concern:

Be it known that we, EMMA R. MOORE and JOHN R. MOORE, citizens of the United States, both residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Fire-Extinguishing Apparatus, which improvement is fully set forth in the following specification and accompanying drawings.

Our invention relates to improvements in automatic fire-extinguishers and alarms; and it consists of the combination of parts, as herein set forth and claimed.

Figure 1 represents a sectional elevation of a fire-extinguishing apparatus in diagrammatic arrangement embodying our invention. Fig. 2 represents a horizontal section on the line *x x*, Fig. 1, on an enlarged scale. Fig. 3 represents a vertical section on the line *y y* of Fig. 2. Fig. 4 represents a front elevation of the automatic valve device.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a portable tank adapted to have liquid gas forced thereinto under pressure through a liquid and gas tight inlet B. To the top of said tank A is connected an outlet-pipe C, which is attached at its opposite end to an automatic valve D, consisting of a casing or shell E, provided with an opening with a flaring nozzle F, having a central conical spreader G attached to the sides of the said nozzle F by webs *g*, thereby forming eduction-ports *g'*. The lower part of the casing E has a tubular extension E', in which is located the stem *h* of a valve II, the latter being conical and normally held against the end of the pipe C, the bottom of the stem being rounded, for a purpose hereinafter stated. The lower end of the said extension E' is formed with recessed guideways *e*, in which is mounted a slide J, having an opening J' with a rounded wall and the ends thereof constructed with eyes *j* and *j'*. To the eye *j* is attached one end of a spring K, whose other end is secured to a depending lug *e'* from the casing E, and the eye *j'* has a portion of a spring K' connected thereto, the other portion of said spring K' being fixed to a lug *k*, depending from the nozzle F. Said portions K' and K' of the sectional spring are united by a cord K², to which

is attached a fuse L, secured at its opposite end to one of two contact-plates *l* of a battery and signal or alarm M.

In lieu of the sectional spring a cord and weight may be employed to control the automatic opening of the slide J and valve II.

In case of fire the fuse L is ignited and the cord K², connecting the springs K' and K', is severed by burning, and at the same time the pressure is relieved from the contact-plate *l*, to which the fuse L is attached, whereby said plate contracts, thus closing the circuit and ringing the bell or signal. The tension on the slide J being relaxed causes the spring K to draw the said slide through the guideway of the extension E' of the casing E, and thereby bring the opening J' under the lower rounded end of the stem *h* of valve II. The pressure on said valve II forces the same down, and the gas escapes through the eduction-ports *g'* of nozzle F, and therefrom is disseminated within the burning apartment. Owing to the rounded end of the opening J and the lower end of stem *h*, there is no liability of a failure of the valve II to be depressed, as the said stem *h* will readily ride off the slide J, which has sustained it elevated, into and through said opening J'. The valve II cannot be closed until the force or pressure of the confined gas is spent, when said valve may be closed and the tank A be refilled with liquid gas and the other parts reset.

While not limiting ourselves to the use of any fire-extinguishing gas, we prefer to employ carbonic-acid gas, which is very effective as a fire-extinguisher and is harmless when brought into contact with or envelops articles of clothing, furniture, or food, thereby allowing the same to be used in stores, factories, holds of boats, and private dwellings.

In addition to or in lieu of the electric signal M, an annunciator may be employed which will indicate the place or position of the fire.

In case of incendiarism an attempt to sever the fuse L would actuate the alarm M, as the pressure would be relieved from the contact-plates *l* and they would close the circuit.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a fire-extinguisher, a tank, a valve therefor having guideways in the casing

thereof, the valve proper having a depending stem, a slide formed with an opening and connected to springs for supporting said valve closed, a fuse attached to a portion of said
5 springs, and a signal, substantially as described.

2. In a fire-extinguisher, a tank, a valve therefor having a discharge-nozzle, a movable plate for primarily supporting said valve, and
10 springs connected with opposite sides of said plate, one of said springs being divided and connected by a cord which when burned releases said plate and allows the valve to open, substantially as described.

15 3. In an automatic fire-extinguisher, a tank with outlet-pipe having at its outer end a valve-chamber with flaring nozzle, a rising and falling valve with stem, and a slide with opening springs connected to the opposite
20 ends of the said slide, one of said springs hav-

ing its parts connected by a fusible cord, said parts being combined substantially as described.

4. An automatic fire-extinguisher having the tank A, with the inlet-pipe B, and an out- 25 let-pipe having at one end the chamber E, with the flaring nozzle F, the latter having therein the spreader G, the rising and falling valve H, with stem h, the latter in the extension E, the slide J, with opening J', the lugs e 30 and k, secured to the walls of said valve-chamber, and the springs K and K', the parts of the spring K being connected by the fusible cord K², said parts being combined substantially as described.

EMMA R. MOORE.
JOHN R. MOORE.

Witnesses:

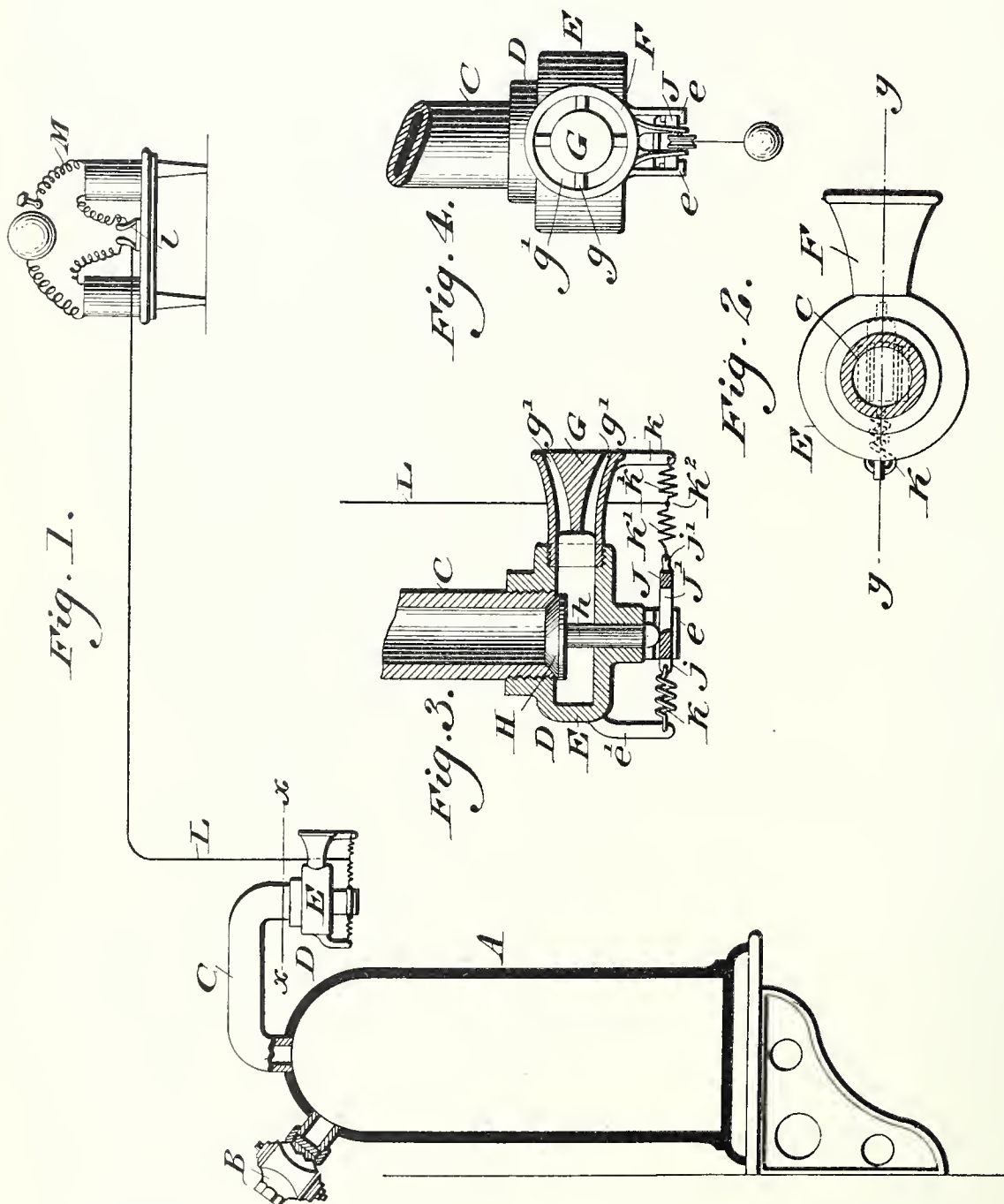
MARY H. POTTS,
WILLIAM J. WALLACE.

(No Model.)

E. R. & J. R. MOORE.
FIRE EXTINGUISHING APPARATUS.

No. 435,316.

Patented Aug. 26, 1890.



WITNESSES:

P. F. Chagles.
L. Douville

INVENTORS.
Emma R. Moore
John R. Moore
BY
John A. Diederichsen
ATTORNEY.

UNITED STATES PATENT OFFICE.

EMMA R. MOORE AND JOHN R. MOORE, OF PHILADELPHIA, PENNSYLVANIA.

FIRE-EXTINGUISHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 435,316, dated August 26, 1890.

Application filed November 11, 1889. Serial No. 329,964. (No model.)

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is attached a fuse L, secured at its opposite end to one of two contact-plates *l* of a battery and signal or alarm M.

In lieu of the sectional spring a cord and weight may be employed to control the automatic opening of the slide J and valve II.

In case of fire the fuse L is ignited and the cord K², connecting the springs K' and K', is severed by burning, and at the same time the pressure is relieved from the contact-plate *l*, to which the fuse L is attached, whereby said plate contracts, thus closing the circuit and ringing the bell or signal. The tension on the slide J being relaxed causes the spring K to draw the said slide through the guideway of the extension *E'* of the casing E, and thereby bring the opening *J'* under the lower rounded end of the stem *h* of valve II. The pressure on said valve II forces the same down, and the gas escapes through the eduction-ports *g'* of nozzle F, and therefrom is disseminated within the burning apartment. Owing to the rounded end of the opening J and the lower end of stem *h*, there is no liability of a failure of the valve II to be depressed, as the said stem *h* will readily ride off the slide J, which has sustained it elevated, into and through said opening *J'*. The valve II cannot be closed until the force or pressure of the confined gas is spent, when said valve may be closed and the tank A be refilled with liquid gas and the other parts reset.

While not limiting ourselves to the use of any fire-extinguishing gas, we prefer to employ carbonic-acid gas, which is very effective as a fire-extinguisher and is harmless when brought into contact with or envelops articles of clothing, furniture, or food, thereby allowing the same to be used in stores, factories, holds of boats, and private dwellings.

In addition to or in lieu of the electric signal M, an annunciator may be employed which will indicate the place or position of the fire.

In case of incendiarism an attempt to sever the fuse L would actuate the alarm M, as the pressure would be relieved from the contact-plates *l* and they would close the circuit.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a fire-extinguisher, a tank, a valve therefor having guideways in the casing

thereof, the valve proper having a depending stem, a slide formed with an opening and connected to springs for supporting said valve closed, a fuse attached to a portion of said
5 springs, and a signal, substantially as described.

2. In a fire-extinguisher, a tank, a valve therefor having a discharge-nozzle, a movable plate for primarily supporting said valve, and
10 springs connected with opposite sides of said plate, one of said springs being divided and connected by a cord which when burned releases said plate and allows the valve to open, substantially as described.

15 3. In an automatic fire-extinguisher, a tank with outlet-pipe having at its outer end a valve-chamber with flaring nozzle, a rising and falling valve with stem, and a slide with opening springs connected to the opposite
20 ends of the said slide, one of said springs hav-

ing its parts connected by a fusible cord, said parts being combined substantially as described.

4. An automatic fire-extinguisher having the tank A, with the inlet-pipe B, and an out- 25 let-pipe having at one end the chamber E, with the flaring nozzle F, the latter having therein the spreader G, the rising and falling valve H, with stem *h*, the latter in the extension E, the slide J, with opening J', the lugs *e* 30 and *k*, secured to the walls of said valve-chamber, and the springs K and K', the parts of the spring K being connected by the fusible cord K², said parts being combined substantially as described.

EMMA R. MOORE.

JOHN R. MOORE.

Witnesses:

MARY H. POTTS,

WILLIAM J. WALLACE.

(No Model.)

C. B. DARLEY.
CORN CUTTING DEVICE.

No. 422,384.

Patented Mar. 4, 1890.

FIG. 2.

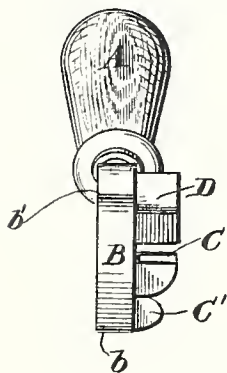


FIG. 1.

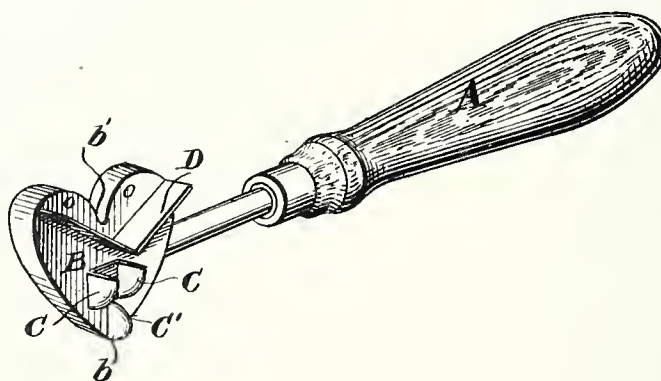
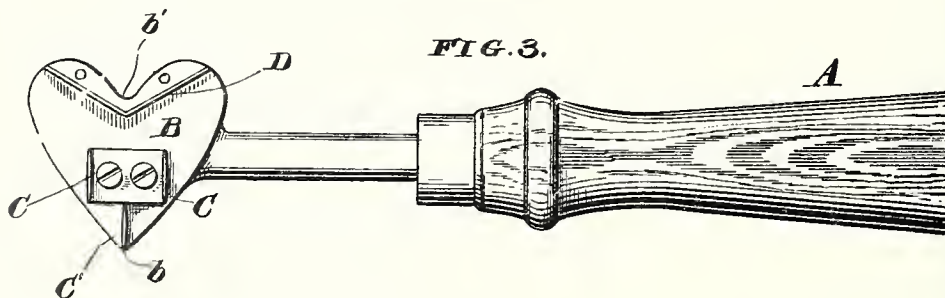


FIG. 3.



WITNESSES:

David S. Williams
Henry D. King

INVENTOR:

Cecilia B. Darley
by her attorney
Francis T. Chambers

UNITED STATES PATENT OFFICE.

CECELIA B. DARLEY, OF PHILADELPHIA, PENNSYLVANIA.

CORN-CUTTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 422,384, dated March 4, 1890.

Application filed May 13, 1889. Serial No. 310,579. (No model.)

To all whom it may concern:

Be it known that I, CECELIA B. DARLEY, of the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful
5 Improved Corn-Cutting Device, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

The object of my invention is to provide an
10 improved device by which the grains of green corn can be slit and removed from the cob and from the husk or skin by which they are surrounded. My device will be best understood after a description of the drawings, in
15 which it is illustrated, and the novel features thereof are hereinafter clearly pointed out in the claim, reference being now had to the drawings, which illustrate my device in the form which I consider the best for practical
20 use, and in which—

Figure 1 is a perspective view of my device; Fig. 2, an end view of the same in about the angular position it occupies in Fig. 1, and Fig. 3 a front view thereof.

25 A is a handle; B, a base-plate, on the front end of which are secured a number of knife-blades C C C'. Preferably I provide the device with a central blade C', to act as a guiding-blade—that is, to pass between two rows
30 of corn, while the blades C C, arranged on each side thereof, will pass approximately through the middle of the rows of corn. When this construction is used, it is advisable that the guiding-blade C' should be somewhat shorter than the slitting-blades C C. D is

a scraper situated behind the slitting-knives, and preferably made deeper than the knives themselves, as shown in the drawings. It is given the wedge-shaped form shown, so as to push out at the sides the split grains of corn
40 scraped from the cobs, it acting somewhat like a plowshare.

I prefer to make the plate B, which supports the knife-blades and scraper, of the heart shape shown, so that the two angles *b*
45 and *b'* shall be in line with the knife-blades and in the center of them, so as to afford a guide to the eye in using the corn-cutting device.

The mode in which my improved device is
50 to be used is obvious from a glance at the drawings. The operator takes hold of the handle and scrapes down along the rows of corn-grains, the knives slitting open the skin and the scraper pressing out the grains, and the
55 operation being very rapidly and completely performed.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—
60

A corn-cutting device consisting of two or more knives for slitting the grains of corn, in combination with a wedge-shaped scraper situated in the rear of the knives, with its point toward them, and a handle, all substantially
65 as and for the purpose specified.

CECELIA B. DARLEY.

Witnesses:

FRANCIS T. S. DARLEY,
GEORGE HOUSE.

(No Model.)

K. E. GUNKLE.
JAR.

No. 422,934.

Patented Mar. 11, 1890.

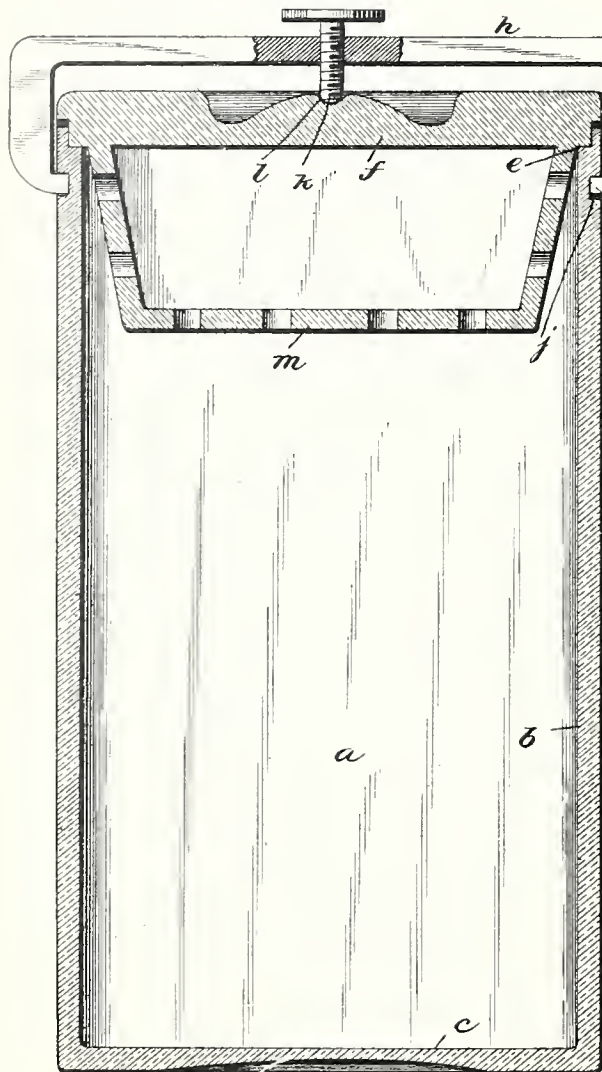


Fig. 1.

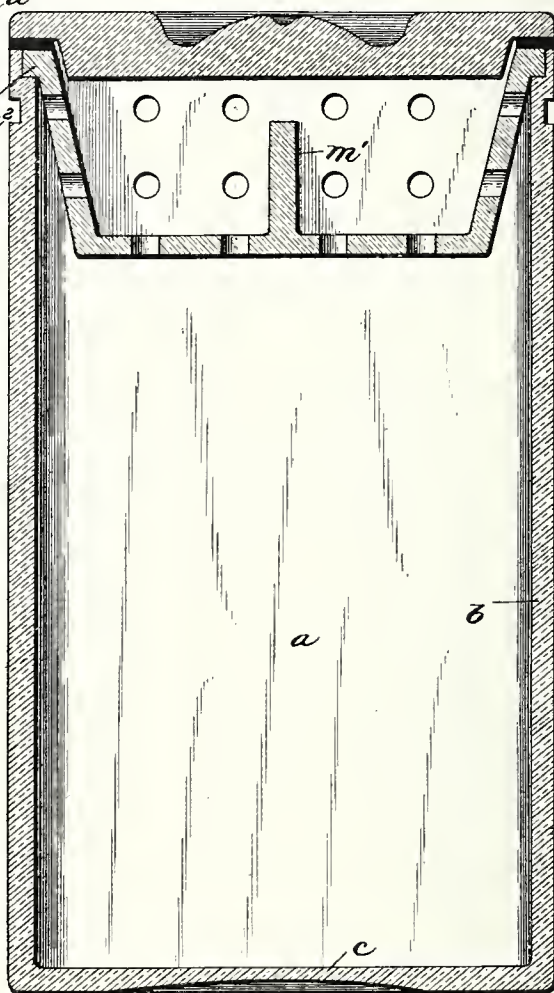


Fig. 2.

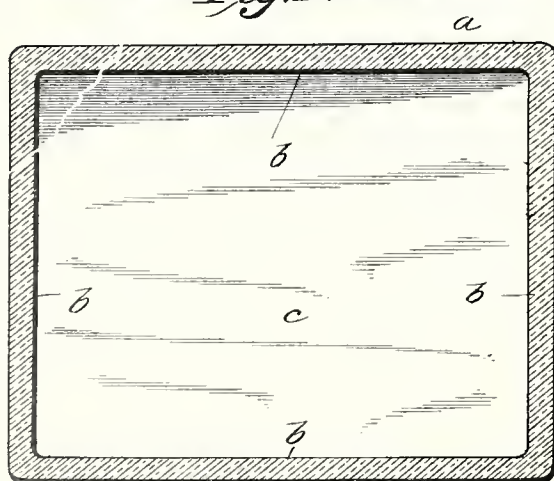


Fig. 3.

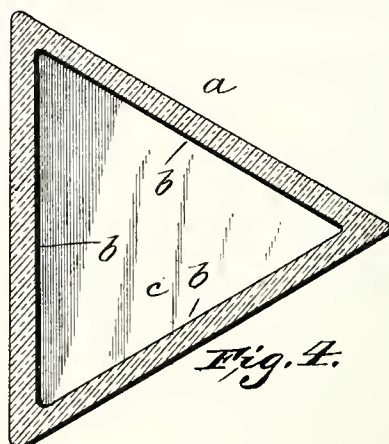


Fig. 4.

WITNESSES

F. L. Ourand
Ed. Sinsell

INVENTOR

Katherine E. Gunkle.
by Wm. H. Finsell
Attorney

UNITED STATES PATENT OFFICE.

KATHERINE ELLMAKER GUNKLE, OF FRAZER, PENNSYLVANIA.

JAR.

SPECIFICATION forming part of Letters Patent No. 422,934, dated March 11, 1890.

Application filed January 20, 1890. Serial No. 337,485. (No model.)

To all whom it may concern:

Be it known that I, KATHERINE ELLMAKER GUNKLE, a citizen of the United States, residing at Frazer, in the county of Chester and State of Pennsylvania, have invented a certain new and useful Improvement in Jars, of which the following is a full, clear, and exact description.

This invention in jars relates more particularly to fruit-jars, and its special objects are to provide means for keeping the contained fruit immersed in the sirup; also, to collect and remove mold; also, to provide for the ready filling and emptying of the jar.

The invention consists in a fruit-jar having a perforated immersing device, which also serves to collect and remove mold; also, in a fruit-jar whose mouth is a continuation of the plane of the body—that is to say, the jar has no neck—all as I will proceed now more particularly to set forth and claim.

In the accompanying drawings, in the several figures of which like parts are similarly designated, Figure 1 is a vertical section showing the cover and immerser made in one piece. Fig. 2 is a similar view showing the cover and immerser made separate. Figs. 3 and 4 are horizontal sections of two forms of jar.

The body *a* of the jar is angular in cross-section—for examples, see Figs. 3 and 4—so as to provide for packing a number of the jars without waste of space. The sides *b* of the jar extend from the bottom *c* straight up to the mouth *d* without deflection and without neck, so that the jar may be filled and emptied easily and without crushing or marring the fruit. The mouth of the jar by preference is made with a shoulder *e* to receive the cover or immerser, presently described. The cover *f* is rabbeted to fit the mouth of the jar, and a gasket *g* may be interposed between them. The cover may be secured to the jar in any desirable manner, but I prefer to employ a clamp *h*, having fingers *i*, which take into grooves *j* in the sides of the jar, a screw *k* being tapped in the clamp and abutting in a cavity *l* in the cover to tighten the clamp upon the cover. The immerser *m*

has a perforated bottom and inclined and perforated ends, so that the liquor or sirup may enter and surround it, and this immerser may be made integral with the cover, as in Fig. 1, in which case its sides facing the observer of the drawing will be open, or the immerser may be made separate from the cover, as in Fig. 2, in which case it will have four inclined and perforated sides, a grasping-piece *m'* for inserting and removing it, and lips *m''* for suspending it within the jar. The action of either form of immerser is to hold the fruit below the level of the sirup. The sirup standing in the immerser the mold will collect therein, and in removing the immerser the mold is carried with it by reason of the confining sides and may be readily washed from it.

Glass or other plastic material may be used for making my jar and immerser.

The immerser may be made and sold separately from the jar.

What I claim is—

1. A cover and an immerser, the latter having inclined perforated sides and a perforated bottom, combined with a jar having straight sides and neck within which the immerser is suspended with its inclined sides free of contact with the sides and neck of the jar, substantially as described.

2. A jar having straight sides and neck and angular in cross-section, combined with a cover and an immerser having inclined perforated sides and a perforated bottom, and angular in outline and suspended within the jar with its inclined sides free of contact with the neck and sides of the jar, substantially as described.

3. The cover *f* and the immerser *m*, made as an integer, the latter having inclined sides and a flat bottom, and the sides and bottom being perforated, substantially as described.

In testimony whereof I have hereunto set my hand this 9th day of January, A. D. 1890.

KATHERINE ELLMAKER GUNKLE.

Witnesses:

H. G. RIESER,

J. FRANK GUNKLE.

(No Model.)

E. C. LAUB.
HOOP SKIRT.

No. 435,649.

Patented Sept. 2, 1890.

Fig. 1.

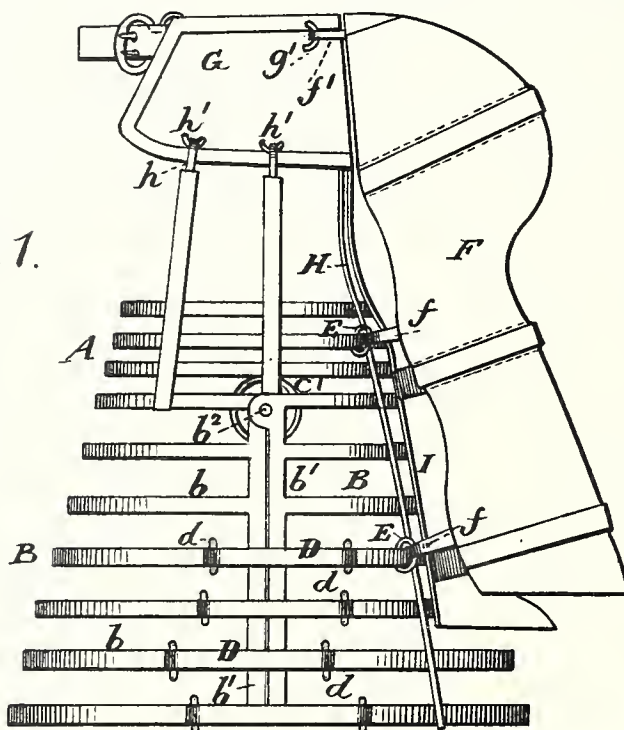


Fig. 2.

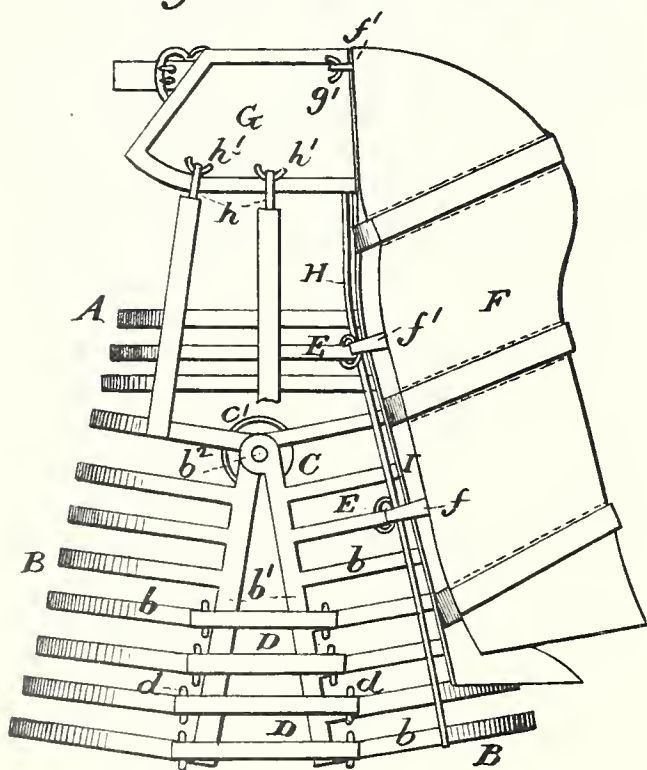
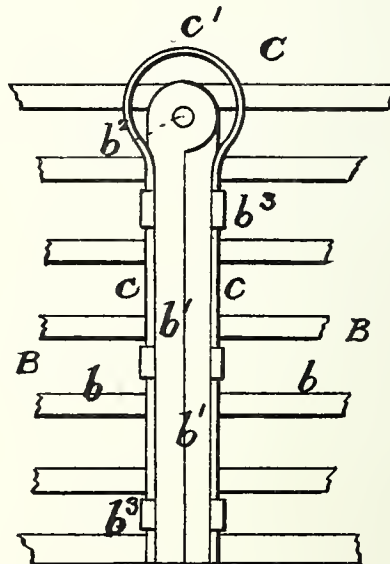


Fig. 3.



Witnesses.

A. Ruppert,

H. A. Daniels -

Inventor.

Emilie C. Laub

Per

Thomas P. Simpson
Atty

UNITED STATES PATENT OFFICE.

EMILIE C. LAUB, OF ALTOONA, PENNSYLVANIA.

HOOP-SKIRT.

SPECIFICATION forming part of Letters Patent No. 435,649, dated September 2, 1890.

Application filed February 14, 1890. Serial No. 340,496. (No model.)

To all whom it may concern:

Be it known that I, EMILIE C. LAUB, a citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Hoop-Skirts; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The special object of this invention is to make a hoop-skirt which will expand and contract at its lower portion in front and behind, thus giving perfect freedom of movement to the limbs of the wearer when walking, and thus rendering it unnecessary to lift the outer garments in order to clear the ground or pavement; also, to make the waistband which supports the skirt detachable, and to connect detachably a bustle with the skirt, so that different sizes of bustles may be worn.

Figure 1 of the drawings is an elevation showing the skirt, waistband, and bustle united; Fig. 2, a side elevation of the hoop-skirt expanded. Fig. 3 is an inside detail view showing the expanding and contracting spring in position.

In the drawings, A represents the upper hoops, of steel or other suitable material, increasing in diameter from the top downward.

B B represent my two sections of the skirt, consisting of semicircular hoops $b\ b$, preferably made integral with the vertical bars $b'\ b'$, the bars of the two semicircular and semi-conical frames being jointed together by the pivots $b^2\ b^2$ at the top.

On the inside of the bars $b'\ b'$, I form tubular guides b^3 , through which pass the arms of a detachable spring C, said arms $c\ c$ being connected at the top by the spring-bow c' , so that they easily expand gradually toward the bottom as the limbs press the frames B B in walking.

In order to guide the frames and cause the meeting edges of the bars $b'\ b'$ to abut squarely against each other, I employ curved guides D, with pivoted end loops $d\ d$, through which pass the semicircular hoops of the frames B B. The circular and semicircular hoops are all connected at the rear of the skirt by two vertical tapes or other flexible connections II, which are made fast thereto, and to these are secured rings E, to which are attached the sides of a bustle F, whereby a bustle of the exact size desired may always be worn.

G is the usual waistband which supports the skirt, and which is detachably connected with the skirt-tapes II I by the hooks and eyes $h\ h'$ and with the bustle by hooks f' and loops g' or equivalent devices.

By connecting the semicircular hoops of the sections B B rigidly to the vertical bars b' they are prevented from curling up inwardly, as is so often the case in the ordinary hoop-skirt.

What I claim as new, and desire to protect by Letters Patent, is—

1. A hoop-skirt having the semicircular and semi-conical frames B B, consisting of the horizontal hoops b and vertical bars b' , the latter pivoted together at the top and provided with an expanding and contracting spring, as and for the purpose described.

2. In a hoop-skirt, the combination, with the jointed frames B B, of the guides b^3 and spring C, having the arms $c\ c$ passing through said guides and connected at top by a spring-bow c' , as shown and described.

3. In a hoop-skirt, the combination, with the frames B B, jointed at the top, of the curved bands D, pivoted at each end to said frames B B by the end loops $d\ d$, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

EMILIE C. LAUB.

Witnesses:

CHAS. E. LAUB,
CHRIST FLINN.

(No Model.)

J. C. HAVENS.
REIN GUIDE.

No. 437,197.

Patented Sept. 30, 1890.

Fig. 1

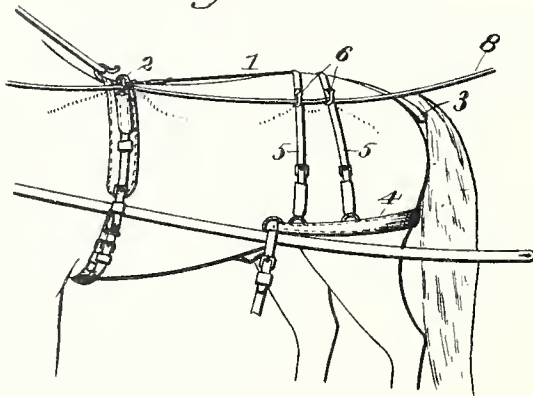
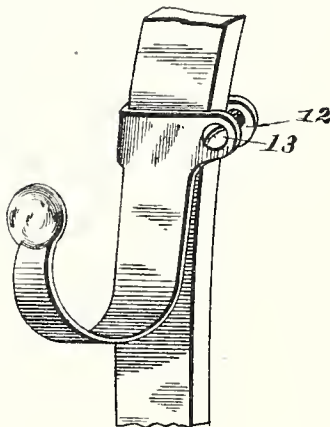


Fig. 2.



Witnesses:

Alan Wyck Budd
J. Daniel Eby

Inventor,
J. C. Havens
by *Wm. A. McQuinn*
att'y

UNITED STATES PATENT OFFICE.

JANE C. HAVENS, OF PHILADELPHIA, PENNSYLVANIA.

REIN-GUIDE.

SPECIFICATION forming part of Letters Patent No. 437,197, dated September 30, 1890.

Application filed November 18, 1889. Serial No. 330,787. (No model.)

To all whom it may concern:

Be it known that I, JANE C. HAVENS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Rein-Guides and Rests for Harness; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof as to enable others skilled in the art to make and use the said invention.

This invention relates to harness for horses used in drawing vehicles, and has for its object the support and guidance of the reins at points on the harness which avoid the annoyance and danger attendant upon the dropping of the reins and the effort to regain them; and it consists of a bracket-hook adapted to be adjustably attached to the hip-straps of the harness; in and through which the reins pass from the eyes or rings upon the terret or saddle to the hands of the driver. The construction and operation and its application to use are shown in the accompanying drawings, in which—

Figure 1 shows a side elevation of the parts of the harness involved with this invention applied thereto, and Fig. 2 an enlarged perspective view of the invention.

The same reference-marks indicate like parts in both figures.

1 represents the crupper-strap of a harness, extending from the saddle 2 to the crupper 3. 4 represents the breech-band, suspended

from the crupper-strap 1 by the hip-straps 5. 35

6 represents the rein guide or support, having a large bow or bend at the lower part and contracted at the upper part, so that the reins may slide easily in the lower part but will not be readily jolted out of the upper part. A cleft or elevis 12 is formed on one side of the hook, of such width as to receive the thickness and breadth of the hip-strap 5 and permit a screw to be inserted in the hole 13 and contract the cleft 12 on the hip-strap, so that it may be firmly clamped in any desired position on the hip-strap without injury to the strap. 40 45

I am aware that rein-guides have been applied to hip-straps of harness which required perforation to be made in the hip-straps to apply and secure them. These I do not claim; but 50

What I do claim is—

A rein-guide having a bow or hook adapted to receive and support the rein, and provided with a compressible cleft or clamp comprising two arms at right angles to the hook, having perforated projections 12, and a bolt or screw 13, passing through the projections, adapted to be adjusted and clamped upon the hip-straps of the harness without mutilation of said straps, substantially as described and shown. 55 60

JANE C. HAVENS.

Witnesses:

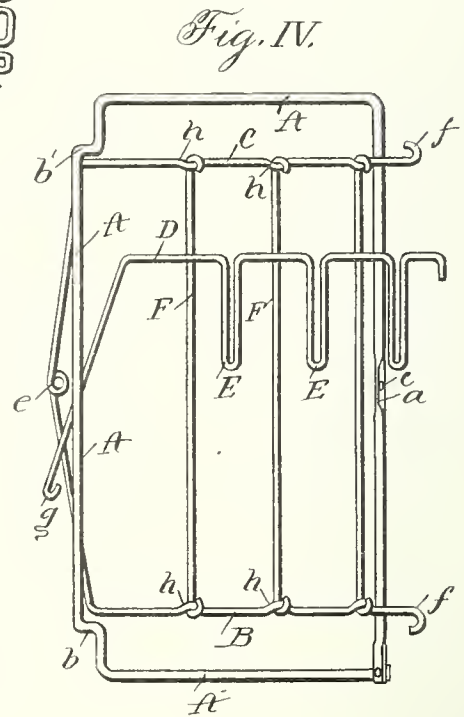
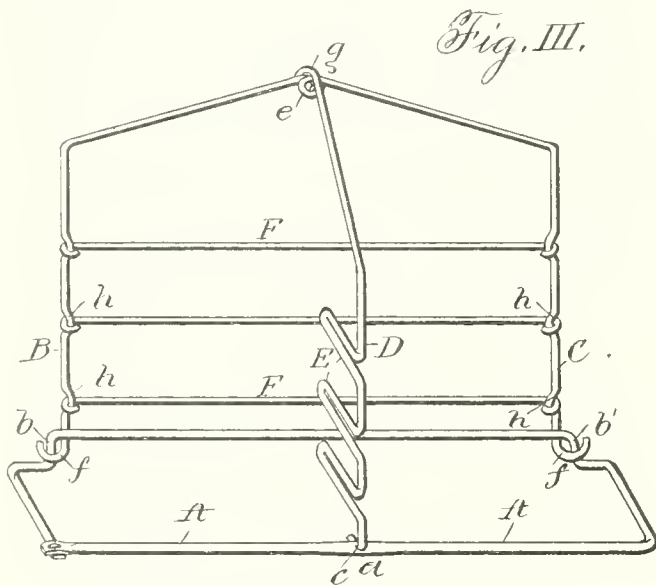
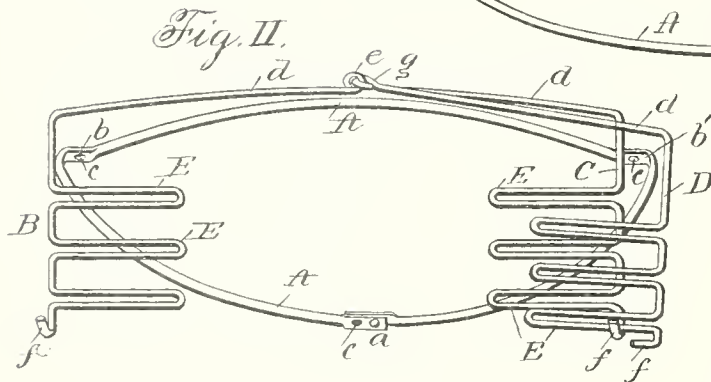
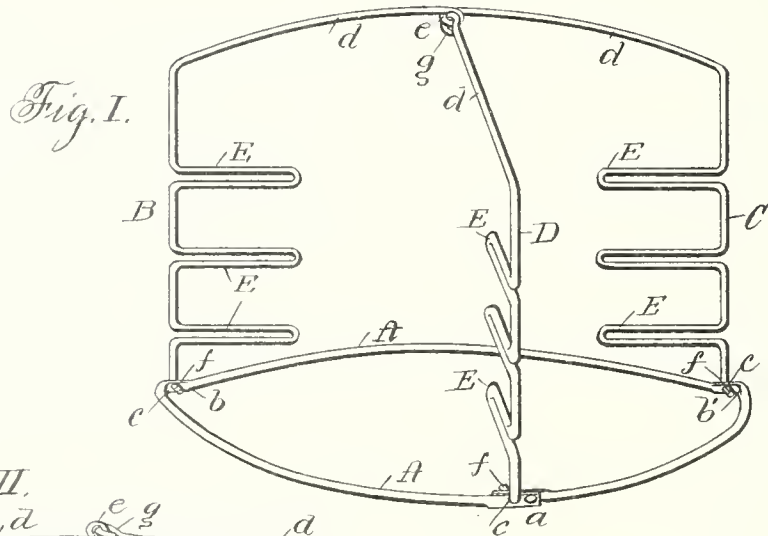
J. DANIEL EBY,
S. LLOYD WIEGAND.

(No Model.)

E. H. AHRENS.
BROILER SUPPORT.

No. 439,569.

Patented Oct. 28, 1890.



Witnesses:
J. G. Lepper.
W. E. Knight

Inventor:
Ella H. Ahrens.
By her Attorneys
Knight Bros.

UNITED STATES PATENT OFFICE.

ELLA H. AHRENS, OF PHILADELPHIA, PENNSYLVANIA.

BROILER-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 439,569, dated October 28, 1890.

Application filed February 26, 1890. Serial No. 341,875. (No model.)

To all whom it may concern:

Be it known that I, ELLA H. AHRENS, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Broiler-Support, of which the following specification, taken in connection with the accompanying drawings, is a full, clear, and exact description of my improvements, such as will enable those skilled in the art to which it appertains to practice it.

My invention is intended as an accessory to broilers, and has for its object to provide a frame for supporting the broiler over the fire which will avoid the necessity of holding it by the hand, as cooks are now usually obliged to do, whereby they suffer from the heat of the fire on face and hands; and my invention has for a further object to construct the broiler-support in knockdown form, so as to allow of its being compactly packed for shipping.

My invention consists, essentially, of an open frame formed of flat metal, iron, wire, or other suitable materials, adapted to fit over the fire-hole of the stove, and having series of projections at different heights to support a broiler at any desired distance above the fire.

In order that my invention may be fully understood, I will first describe the same with reference to the accompanying drawings, and then more particularly point out in the claims the novel points.

In said drawings, Figure I is a rear perspective view of the preferred form of my invention, and Fig. II is a plan view of the same in knockdown position ready for packing. Fig. III is a rear perspective view of a second form of my invention, and Fig. IV is a plan view of the same in knockdown position.

In the preferred form of my invention (shown in Figs. I and II) I form the support in three parts of heavy iron wire. A is the base formed in substantially oval form of heavier wire than the other parts of the frame, having the ends of the wire slightly flattened and riveted or welded at *a*; or the base may be made entirely of flat iron or other metal. *b* *b'* are slight irregularities in the regular form of the base, also flattened, as at *a*. Through

these flattened portions at *a*, *b*, and *b'* are formed perforations *c*, for the purpose presently to be explained. B, C, and D are the legs of the frame, having horizontal portions *d* and being joined at *e*. Each of the legs B, C, and D is formed with a hook *f* at its lower end for engagement into the perforations *c* in the base A, and a series of radial projections E for supporting the broiler at the desired distance above the fire, and the leg D has in addition a hook *g* for engagement with the loop *e*. The legs B and C are formed in one piece, having the loop *e* at the top for making the connection with the leg D. The radial projections E are made in the form of loops, formed by bending the continuous piece of wire back on itself, as clearly shown in the drawings. By unhooking the hooks *f* from the perforations *c* in the base the legs may be folded flat together and laid on the base A, ready for shipping, as clearly shown in Fig. II.

Referring now to Figs. III and IV, I will describe my invention in its modified form. The base A is made oblong in form, the ends being riveted or welded together. This base-piece has the flattened part *a* with the perforation *c* and the irregular parts *b b'*. In this form, however, the irregularities extend perpendicularly to the plane of the base, which raises one side of the base out of the plane of the other sides. The leg D in the modified form is constructed exactly like the leg D in the preferred form, but the legs B and C are slightly different. The legs B and C are formed of one piece, with the loop *e* at the top and center and the hooks *f* (of slightly different shape for surrounding the wire forming the base of the irregularities *b b'*, instead of passing through perforations at such points) at the bottom, but without the radial projections E. Instead of the projections E, the legs B and C are formed with a series of slight bends *h*, in which are supported between the legs of the horizontal arms F. The hooks *f* can be disengaged from the base A and folded onto it for shipping, as in the preferred form, as shown in Fig. IV.

The hook *g* at the top of the support may be an open hook, as shown in Fig. I, or it may be a closed hook, as shown in Fig. III, it be-

ing obvious that if the hook is open, as in Fig. I, the leg D can be separated from the legs B C.

Any ordinary broiler—such as are now in every day use—can be supported on this frame over the fire at any desired height until the food is cooked, the height being regulated according to the heat of the fire and other varying conditions, and should the article being cooked become too hot and seared, the broiler can be as readily removed from the support, as ordinarily.

I have specifically described and illustrated two forms of my invention; but it is obvious that other forms of the same could be used without departing from the spirit of the invention. However, I wish it clearly understood that my device is essentially different from those frames used to support articles in steaming-vessels, such frames being wholly unsuited to be used over the fire-hole of a stove, and my device being equally as unsuitable for steaming purposes.

Having thus fully described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. A knockdown broiler-support consisting of an open base A and legs B, C, and D, detach-

ably connected to said base, whereby the whole may be collapsed and packed in a small space, as herein set forth.

2. In a knockdown broiler-support, the combination of the base A with the legs B, C, and D, hinged together at *e* and detachably connected to the base, as herein set forth.

3. In a broiler-support, the combination of the base A, having flattened perforated portion *a* and irregularities *b b'*, with the legs B, C, and D, joined at *e* and having hooks *f* for engaging the base at *a*, *b*, and *b'*, as herein set forth.

4. In a broiler-support, the combination of the open base A with the legs B, C, and D, provided with projections E, each of said legs and its projections being formed of a continuous piece of metal bent into the proper shape, as herein set forth.

5. In a broiler-support, the combination of the open base A, having perforations *c*, and the legs B, C, and D, joined at *e* and having projections E and hooks *f*, substantially as herein set forth.

ELLA H. AIRENS.

Witnesses:

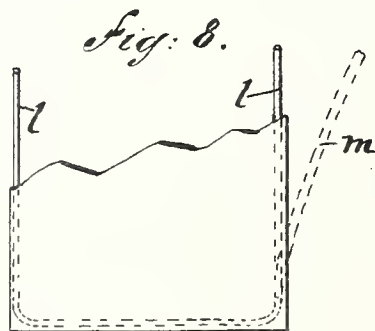
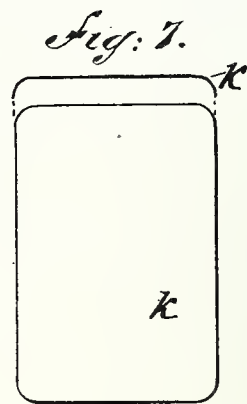
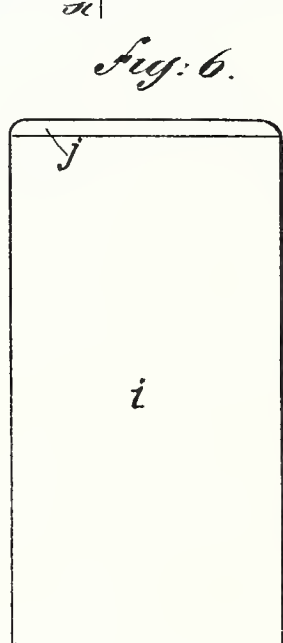
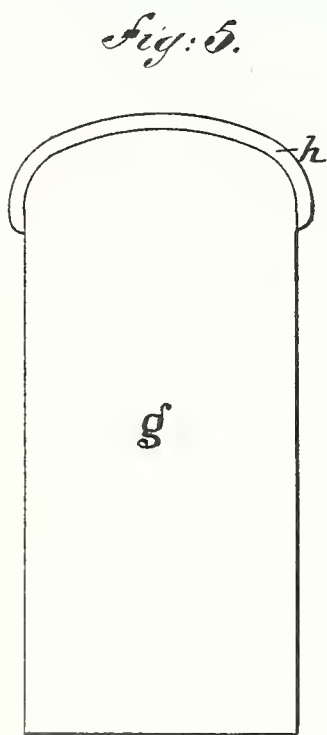
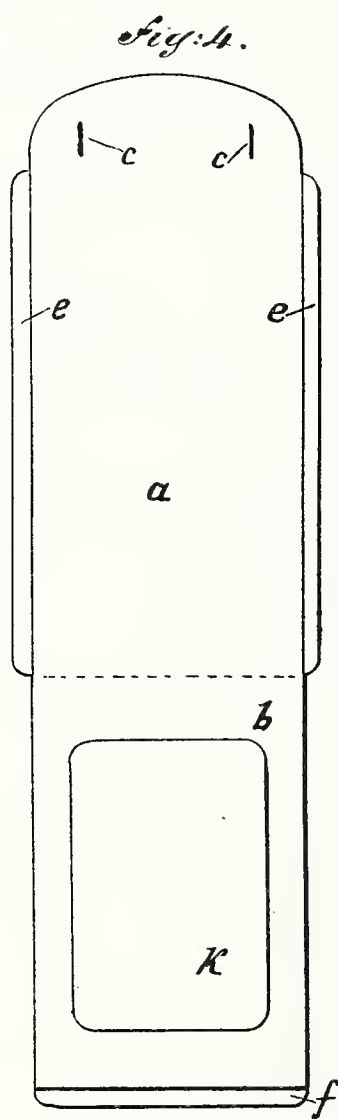
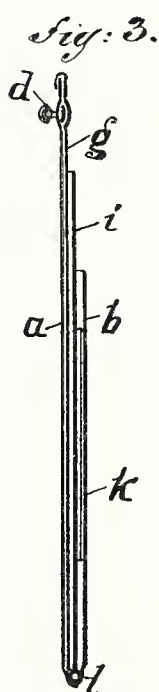
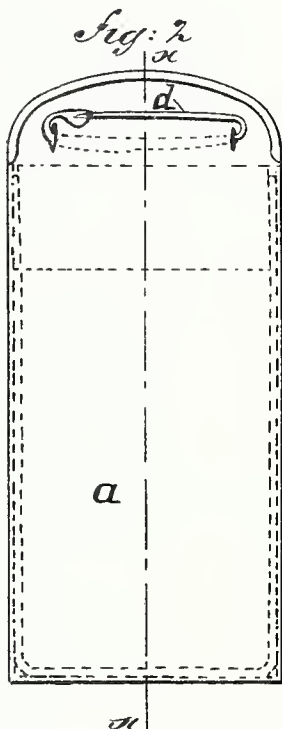
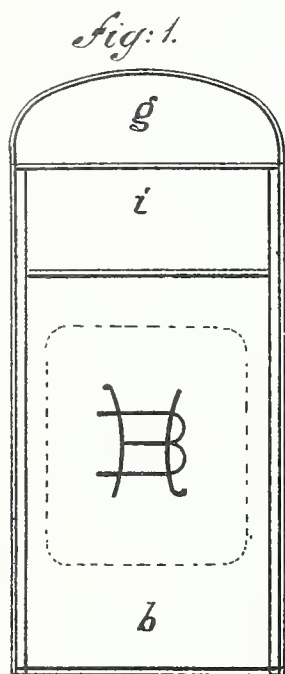
WM. K. SHRYOCK,
H. KENNEDY.

(No Model.)

L. L. EYRE.
SPECTACLE CASE.

No. 441,651.

Patented Dec. 2, 1890.



WITNESSES:
Chas. Nida
Lincoln L. Eyre

INVENTOR:
Louisa Lear Eyre,
BY *Harold Dimmey*
ATTORNEY

UNITED STATES PATENT OFFICE.

LOUISA LEAR EYRE, OF PHILADELPHIA, PENNSYLVANIA.

SPECTACLE-CASE.

SPECIFICATION forming part of Letters Patent No. 441,651, dated December 2, 1890.

Application filed July 10, 1890. Serial No. 358,276. (No model.)

To all whom it may concern:

Be it known that I, LOUISA LEAR EYRE, a citizen of the United States, residing in the city of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Spectacle-Cases, of which the following is a specification.

My invention relates to cases for eyeglasses and spectacles; and it consists of the improved parts and construction hereinafter set forth.

My objects are to produce a light ornamental case for two or more pairs of glasses, which shall be in general flexible but rigid where the delicate parts are located, or affording ample protection against bending in certain lines. At the same time I aim at making the case simple, easy to manufacture, and hence inexpensive. I attain my end by constructing my device as shown in the accompanying drawings, wherein—

Figure 1 is a front elevation of one form of my device. Fig. 2 is a rear elevation of the same. Fig. 3 is a sectional view on line *xx* of Fig. 2. Figs. 4, 5, 6, and 7 are views of the various parts. Fig. 8 is a detail view.

Like letters indicate like parts.

The case consists of the back piece *a*, formed integrally with the front piece *b*, having the holes *c* for retention of the suspending device or pin *d*, and having also the turn-over edges *e* and *f*; an inner facing *g* for the back piece, having a turn-over edge *h* for attachment to the upper end of the back piece; a middle piece *i*, with the turn-over edge *j* at its upper end, and, finally, a stiffening-plate *k* for the center of the case, and a wire spring *l* for the two sides and lower edge of the case. These parts may of course be considerably varied without departing from my invention, and in one form I leave out the spring, the wire, or both. The finishing-edges *j* and *f* are first turned down and secured and the plate *k* attached to the inner side of the front *b*. Then the facing *g* and middle piece *i* are laid in place on the back *a*, and the front *b* is folded up after putting the wire *l*, if desired, in place. The parts are then secured by turning over the flaps *e* and *h* and securing the same by cement or sewing. A monogram may now be attached above the plate *k*, which latter will protect it and the bridge of the glasses, with its delicate attachments, from fracture, while

leaving the case, as a whole, flexible and soft. The wire spring *l* is, when in position, constrained. The two arms tend to fly out, as shown at *m* in Fig. 8. Thus while the case may be bent in lines parallel to its length and may be spread open for the more easy removal of its contents, the springs, when released, draw the sides out, and consequently draw the front and back toward each other, thus retaining the glasses under slight pressure between the soft material of the case and preventing the possibility of their falling out or rattling. For some forms of eyeglasses it is desirable to construct the part *k* of metal and in the form shown in the two views of Fig. 7, whereby the delicate nose attachments are entirely protected in the dome formed under the plate *k*, while the spring *l* acts, as before, to constrain the mouth or lips of the case and retain the glasses in position. The effect of the plate *k* so constructed is shown in Fig. 3, though, for obvious reasons, the constraint caused by the wire *l* is not therein brought out, the drawings being merely intended to show the apparatus. In Fig. 8 the position that the spring *l* tends to assume is shown in dotted lines at *m*. It will now be seen that two pairs of glasses may be placed in the case and securely held in position without danger of damage, while they may be readily withdrawn, being selected and distinguished by their positions in the case.

There may be any number of middle pieces, and hence a corresponding number of pockets, all within the scope of my invention; and I do not limit myself to the precise details described, as many variations may be suggested within my invention.

I am aware that scissor-cases have been made of successive steps, but of rigid material, owing to necessities of form and construction, and that apron cases for tools have long been made with overlying pockets, but, however, without affording rigid protection for the tools.

I am also aware that French money-cases have been made of flexible leather having two pockets; but I do not know and do not believe that the flexible feature so important in some instances has ever been combined with my other features in such a case to the production of a result due to the union of fea-

tures and not due to the sum of the features themselves. This I have attained and claim as follows:

- 5 1. A multiple spectacle-case formed of successive flexible blanks of equal width laid together and all secured at or near their edges, the back and front being of a single piece, having holes *c c* and a hanging device inserted through the holes.
- 10 2. A multiple case formed of flexible blanks of equal width laid together and secured at or near their edges, the back piece having

holes *c c*, and a hanging or attaching device retained by said holes, substantially as set forth.

3. In a spectacle-case, a trough-shaped or 15 arched stiffening-plate at the center of the case, whereby the nose-piece or other contents of the case may be protected at that point.

Witness my hand this 7th day of July, 1890.

LOUISA LEAR EYRE.

In presence of—

LINCOLN L. EYRE,

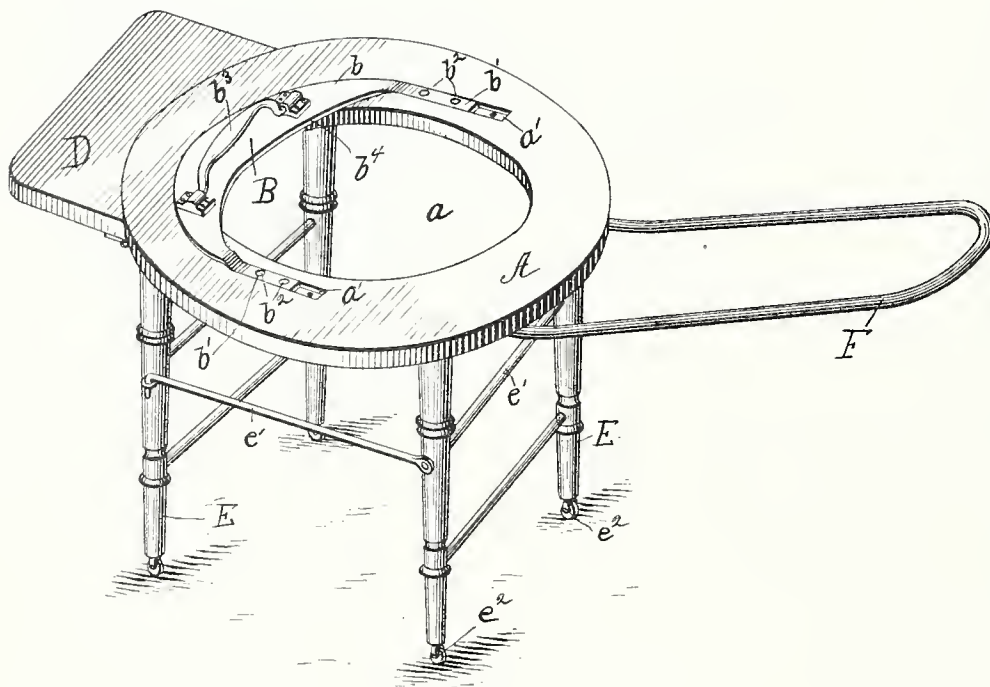
SHARSWOOD BRINTON.

(No Model.)

M. HOYER.
BABY WALKER.

No. 443,853.

Patented Dec. 30, 1890.



Witnesses:

Anna Boyer.
J. W. Lilley.

Inventor.

Margret Boyer.

UNITED STATES PATENT OFFICE.

MARGARET HOYER, OF RIXFORD, PENNSYLVANIA.

BABY-WALKER.

SPECIFICATION forming part of Letters Patent No. 443,853, dated December 30, 1890.

Application filed November 20, 1889. Serial No. 331,036. (No model.)

To all whom it may concern:

Be it known that I, MARGARET HOYER, a citizen of the United States, residing at Rixford, McKean county, and State of Pennsylvania, have invented a new and useful Improvement in that class of apparatus known as Baby-Walkers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same.

The invention consists of constructions and combinations, all as will be hereinafter described in the specification, and pointed out in the claim, reference being had to the accompanying drawing, in which the figure represents a perspective view of the improved apparatus.

A represents a table, preferably circular in form and having a central opening *a* in its top large enough to receive the body of a child and constitutes what may be called the body of the apparatus.

B is a plate screwed to the table and adapted to be moved back and forth over the opening *a* to increase the size thereof to fit the bodies of different-sized children. It consists of a semicircular plate *b*, having an inner concave edge *b¹* and arms *b'*, which rest in the slides *a'*, countersunk in the top of table A, the arms *b'* being bent or offset to permit of their entering the countersink and

allow the body thereof to rest upon the top of the table. The plate may be held in place by any desired means, that shown being a bolt or pin *b²* passing through it and the table being preferred. It may be provided with a handle *b³*, by which the plate can be adjusted or the whole apparatus moved.

D is an extension of table A, and may be hinged thereto and supported therefrom in any known manner. The body of the table is supported on legs E, preferably hinged to the under side of the top in such a manner as to permit of their being folded thereunder, the pairs of legs being held in their supporting position by a trace-rod *e'*, pivotally connected to one set of legs and bolted to the opposite pair in the manner shown in the drawing. The legs are provided with casters *e²*, so that the device can be easily moved. F is a handle by which the device can be moved when desired.

I claim—

The combination of the table having the central opening and countersinks and the superimposed curved adjustable plate having arms bent to conform to the top of the table and the countersinks.

MARGARET HOYER.

Witnesses:

ANNA HOYER,
I. A. LILLEY.

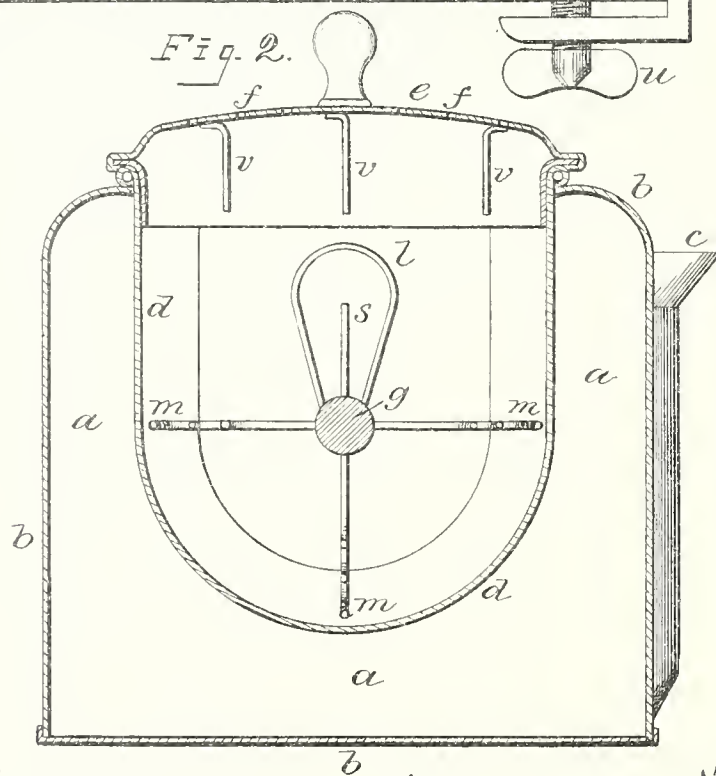
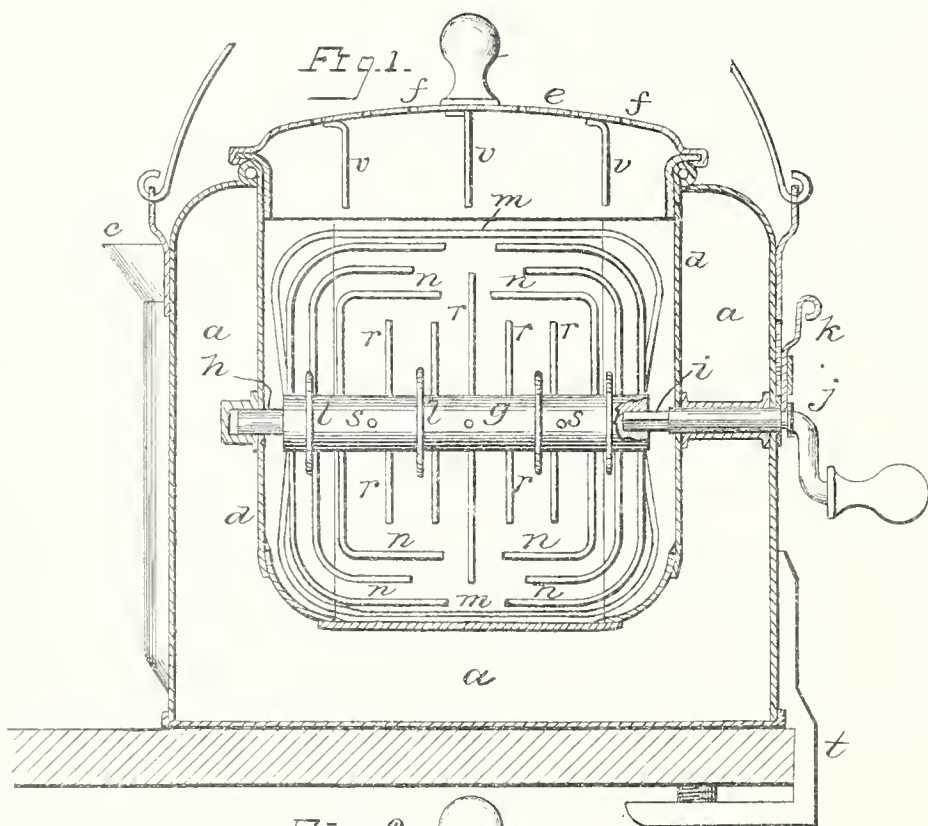
(No Model.)

2 Sheets—Sheet 1.

E. R. KIRK.
POTATO MASHER AND BEATER.

No. 431,984.

Patented July 8, 1890.



WITNESSES:

Philip F. Larner,
Howell Zantle

INVENTOR

Elizabeth R. Kirk
BY
John M. Johnson
ATTORNEYS.

E. R. KIRK.
POTATO MASHER AND BEATER.

No. 431,984.

Patented July 8, 1890.

Fig. 3.

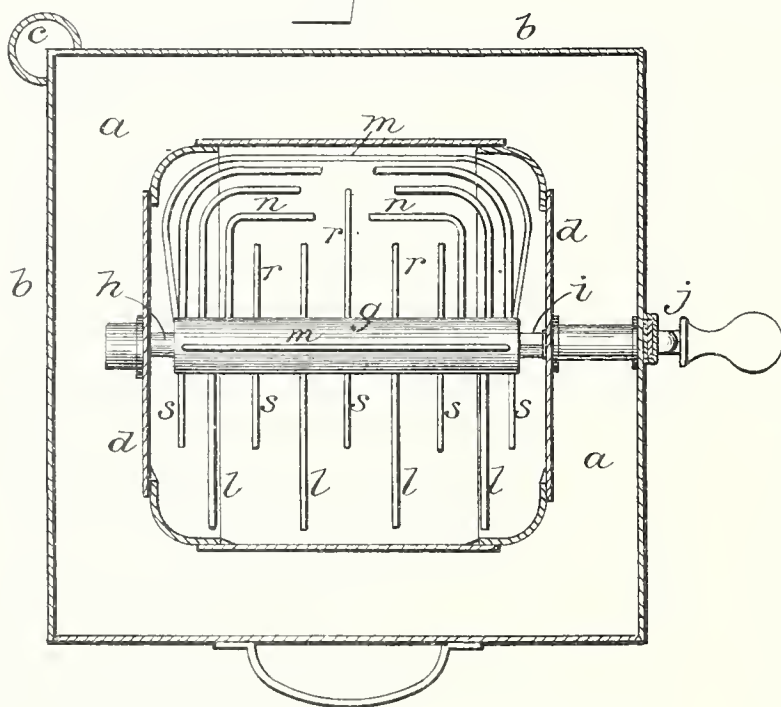
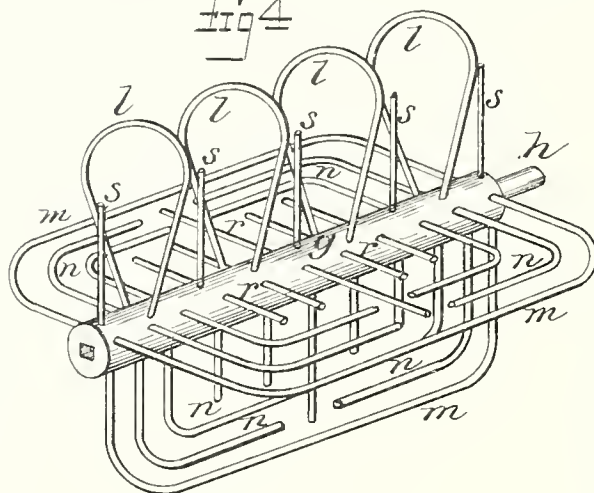


Fig. 4.



WITNESSES:

Philip F. Larnet.
Howell Zarth

INVENTOR

Elizabeth R. Kirk
BY
John W. Johnson
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ELIZABETH R. KIRK, OF WEST CHESTER, PENNSYLVANIA.

POTATO MASHER AND BEATER.

SPECIFICATION forming part of Letters Patent No. 431,984, dated July 8, 1890.

Application filed May 14, 1890. Serial No. 351,738. (No model.)

To all whom it may concern:

Be it known that I, ELIZABETH RICHARDS KIRK, a citizen of the United States, residing at West Chester, in the county of Chester and State of Pennsylvania, have invented a new and useful Improvement in Potato Mashers and Beaters, of which the following is a specification.

My invention is directed to the production of an improved device for mashing and beating potatoes and preparing them for the table; and the object of my improvement is to effect the perfect mashing and beating of the potatoes and in serving in the first or cooking heat. For this purpose I have devised a revolving beater of certain construction for use in a heat-retaining vessel, which I have found to give better satisfaction than any article for the purpose which I have been able to buy in the stores for use in my hotel, and the precise improvement will be pointed out in the claims concluding this specification.

Referring to the accompanying drawings, Figure 1 is a longitudinal vertical section of my improved potato masher and beater, the revolving body being shown in elevation. Fig. 2 is a vertical cross-section of the same. Fig. 3 is a horizontal section of the same, and Fig. 4 shows the revolving beater-body in perspective.

The vessel or casing is made of tin double-walled, with an intervening chamber *a* entirely around its vertical sides and bottom for receiving hot water, whereby the vessel is heated to retain the heat of the potatoes in preparing them for the table.

The outer casing *b* is preferably square with a flat bottom, and is provided with a top funnel-opening *c* for introducing the hot water into and emptying it from the heating-chamber.

The inner casing *d* is made with a circular bottom and is closed by a cover *e*, which has holes *f*, to allow for the escape of the steam in mashing and beating the potatoes. The revolving wire masher and beater is mounted horizontally within this casing by a shaft *g*, having a journal-bearing *h* at one end which fits in a socket in the inner vertical wall, so that there is no opening into the water-chamber. The other end of the shaft has a square socket to receive the square end *i* of a short

operating crank-shaft *j*, which passes through an opening in the opposite double wall, has its bearing therein, and is retained in its connection with the masher-shaft by a latch *k*, secured on the outer casing, so as to fit over a collar on the crank-shaft, so that the latter can be removed to remove the masher from the vessel.

The form and arrangement of the wires upon the shafts which I have found most effective and satisfactory for preparing potatoes for the table are shown in Fig. 4. These wires are suitably set or secured in the shaft in longitudinal rows and are of sufficient size to be stiff and rigid. I find that four rows are enough for vessels having a capacity for a half or a quarter peck of potatoes, and in one of these rows I form some of the wires of transverse bows or loops *l*, so as to act as cutters to divide the potatoes into smaller pieces, and for this purpose these bows or loops revolve edgewise in the direction of their motion. In the other rows the outer wires form loops or bows *m* parallel with the shaft, so as to act as scrapers to prevent the potatoes from adhering on the rounded bottom and vertical walls of the chamber, and for this purpose these bows or loops are of the same length as the shaft and their ends are radial. The space within these scraper-forming bows is filled in by two or more L-shaped wires *n*, the horizontal ends of which are parallel with the scraper-bows and leave a space between them in the middle of the length of said scraper-bows, while the space between the inner of these L-shaped wires is filled by radial wires *r*, the middle one of which extends in the space between the ends of the L-shaped wires. Short radial wires *s* are arranged between the transverse cutter bows or loops. The wires thus disposed and formed when revolved give perfectly reducing action on the potatoes and mash them into the desired condition, during which the steam passes off through the top perforations. The cream and seasoning are then put into the vessel and the masher again revolved to prepare the potatoes for the table.

It is important to notice that the wires, which serve chiefly to reduce and mash the potatoes, are not connected to each other, and while this construction and arrangement ren-

ders such mashing action perfect it gives the advantage of allowing the masher to be freed of the potatoes in taking it out of the chamber. This is done by shaking the masher before lifting out, when it will be found that the potatoes will readily fall from between the disconnected wires. Were these wires all connected together within the space of the scraper bows or loops they would tend to fill and hold the mashed potatoes in removing the masher-body, and thus be objectionable.

The case is provided with a clamp formed of an L-shaped bracket *l*, provided with a clamp-screw *u*, by which it is secured to a table. The radial wires may be staggered in the shaft and set the proper distance apart. In placing the potatoes in the vessel the revolving masher should be set so as that the transverse bows will first act to divide them, and for this purpose act edgewise and are much stronger than the other wires, the disposition and form of which mash and beat the potatoes into the desired fineness and thoroughly mix with the cream and seasoning.

I may provide the cover with wires *v* projecting downward from its under side and arranged in rows or otherwise and of any suitable form, so as to co-operate with the revolving beating-wires in mashing and beating the potatoes.

I claim as my improvement—

1. In a potato masher and beater, the combination of a jacketed heating-vessel, a detachable masher and beater having a shaft provided with rows of wires, in one of which rows there are transverse bows or loops *l*, with intermediate short wires *s*, the other rows being formed of an outer scraper bow or loop *m*, the space within which is filled with L-shaped wires *n* and short radial wires *r*, and means for revolving said masher and beater, as shown and described.

2. In a potato masher and beater, the re-

volving body formed of a center shaft having a journal-bearing at one end and a square socket in the other end, longitudinal rows of wires, the wires of one row being bows or loops *l*, arranged transversely with the shaft, and short wires *s* between said bows, the wires of the other rows being formed of an outer scraper bow or loop *m*, inner L-shaped wires *n* at each end, and short radial wires *r*, the middle one of which extends into the space between the ends of the said L-shaped wires, substantially as described.

3. The potato masher and beater herein described, consisting of the jacketed heating-vessel having a cover provided with holes, a clamp at its lower edge, registering journal-openings in said double walls, a detachable masher and beater formed of a center shaft having a journal-bearing at one end and a square socket in the other end, longitudinal rows of wires, the wires of one row being transversely arranged, cutter-bows *l*, and short intermediate wires *s*, the other rows formed of an outer scraper-bow, inner L-shaped wires *n* at each end, and radial short wires *r*, and a detachable crank-shaft for revolving the masher and beater, substantially as described.

4. In a potato-masher, the combination of a jacketed heating-vessel, a detachable masher and beater shaft provided with wires suitably arranged to mash and beat the potatoes, means for revolving said masher and beater, and a removable cover provided with coacting wires projecting downward from its under side, as herein set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ELIZABETH R. KIRK.

Witnesses:

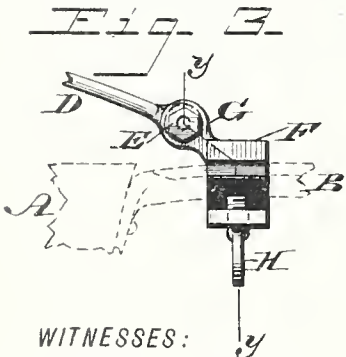
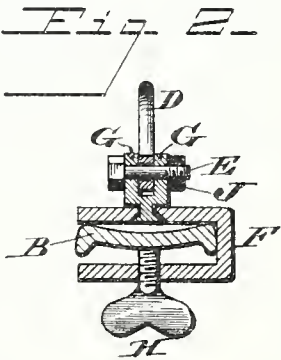
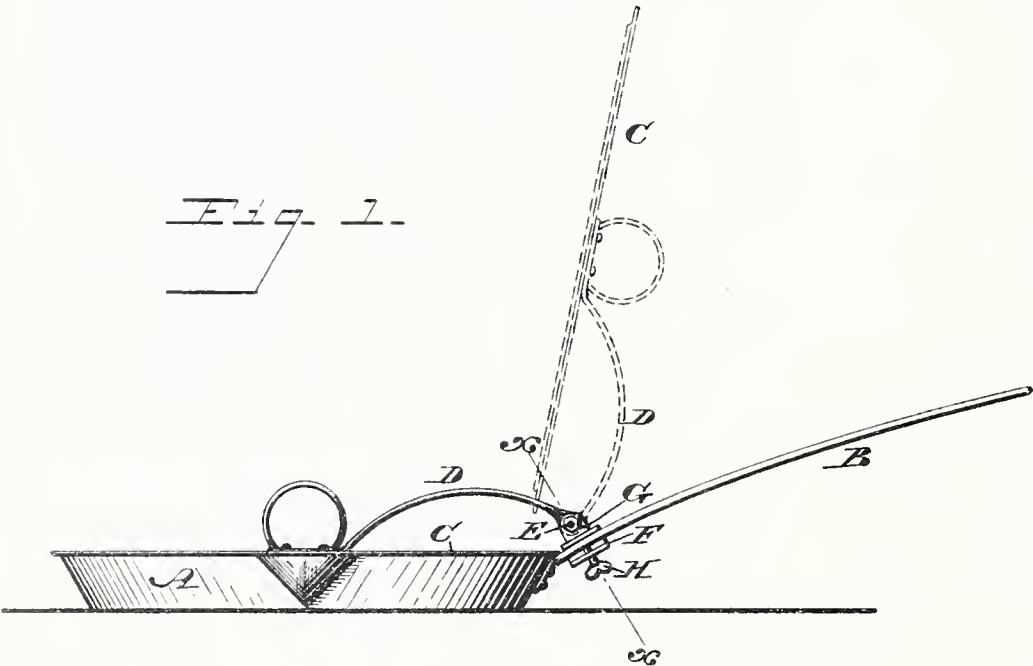
HORACE M. PHILIPS,
S. S. PEARSON.

(No Model.)

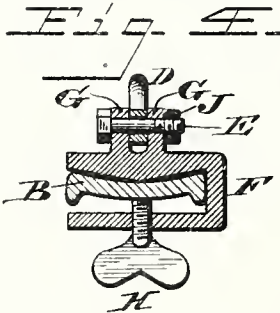
C. HARTLEY.
LID FOR FRYING OR OTHER PANS.

No. 444,702.

Patented Jan. 13, 1891.



WITNESSES:
L. Downville,
Robt. Aston.



INVENTOR
Caroline Hartley
BY John A. Fiedersheim
ATTORNEY.

UNITED STATES PATENT OFFICE.

CAROLINE HARTLEY, OF PHILADELPHIA, PENNSYLVANIA.

LID FOR FRYING OR OTHER PANS.

SPECIFICATION forming part of Letters Patent No. 444,702, dated January 13, 1891.

Application filed September 4, 1890. Serial No. 363,889. (No model.)

To all whom it may concern:

Be it known that I, CAROLINE HARTLEY, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Lids for Frying or other Pans, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a lid for frying or other pans which is detachably connected with the handle thereof and adapted to be raised or lowered and swung laterally, as desired.

Figure 1 represents a side elevation of a frying-pan with lid embodying my invention connected therewith. Fig. 2 represents a section thereof, on an enlarged scale, on line *x x*, Fig. 1. Fig. 3 represents a side elevation of another form of the clamp for securing the lid to the handle of the pan. Fig. 4 represents a section thereof on line *y y*, Fig. 3.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a frying-pan, and B the handle thereof, each being of any well-known form of construction.

C designates a lid or cover, to which is secured one end of an arm D, the latter, which is preferably of curved form, being pivoted at its other end by a bolt E to a clamp F. The said clamp F is provided with ears G, in which the bolt E is secured, and which are swiveled to one limb of the said clamp, as shown in Figs. 1 and 2, while in the form shown in Figs. 3 and 4 the ears are fixed to the clamp. In the latter figures the upper limb has a tongue on its under side to conform to the convexity of the upper side of the handle, so that when the screw H, which passes through the lower limb of the clamp and bears against the handle, is operated the upper limb of the clamp bears uniformly upon the said handle and interlocks therewith.

To hold the bolt E in place in the ears G,

a nut J is placed on the screw-threaded end thereof.

It will be seen that owing to the pivotal connections of the arm D with the clamp by means of the bolt E the lid can be swung upward, as shown in dotted lines, Fig. 1; or it may by the swiveled connection of the ears G with the clamp F be moved laterally, so as to be removed from over the pan and to one side thereof. The lid as thus connected can be readily removed from the handle of the pan, so that the latter can be used without the said lid, and the pan and lid thus detached can be more conveniently packed, if desired, for carriage.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A pan having a handle and lid with a projecting arm and a clamp removably attached to the said handle, said arm of the lid being pivoted to said clamp, substantially as described.

2. A pan with a handle, a lid with an arm, and a clamp having a swiveled bracket or portion to a bolt in which said arm is pivoted, said parts being combined substantially as described.

3. A pan with a handle, a lid with an arm, and a clamp having ears swiveled to a limb thereof and provided with a bolt to which said arm is pivoted, said parts being combined substantially as described.

4. A pan with a handle, a lid with an arm, and a clamp having ears swiveled to a limb thereof, said arm being pivotally connected with said ears and the upper limb of the clamp conforming to the face of the handle, said parts being combined substantially as described.

CAROLINE HARTLEY.

Witnesses:

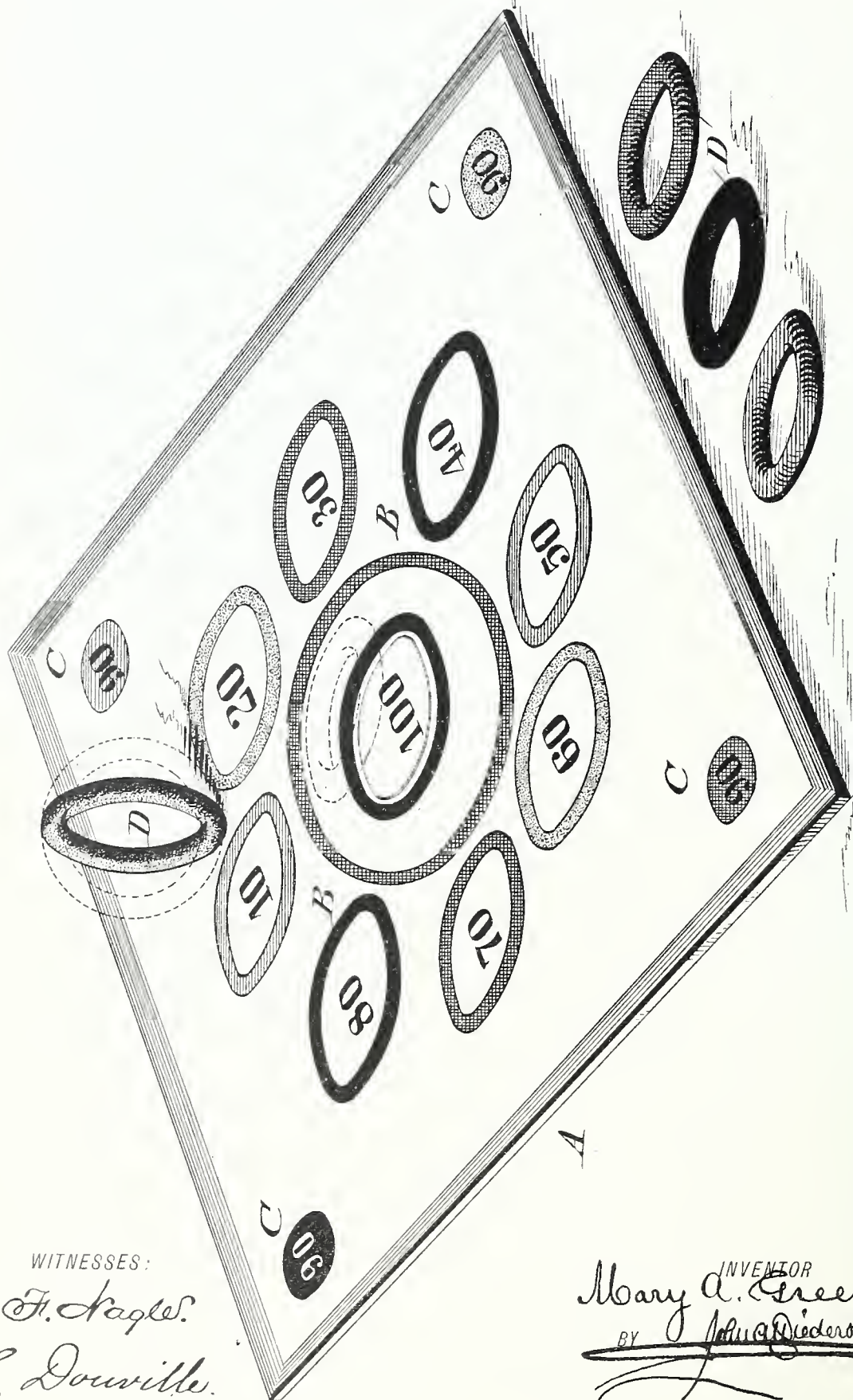
JOHN A. WIEDERSHEIM,
A. P. JENNINGS.

(No Model.)

M. A. GREENE.
GAME.

No. 445,016.

Patented Jan. 20, 1891.



WITNESSES:

P. F. Nagle.
L. Douville.

INVENTOR
Mary A. Greene
BY *John Diederich*
ATTORNEY.

UNITED STATES PATENT OFFICE.

MARY A. GREENE, OF PHILADELPHIA, PENNSYLVANIA.

GAME.

SPECIFICATION forming part of Letters Patent No. 445,016, dated January 20, 1891.

Application filed November 6, 1890. Serial No. 370,482. (No model.)

To all whom it may concern:

Be it known that I, MARY A. GREENE, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Games, which improvement is fully set forth in the following specification and accompanying drawing.

My invention consists of a game formed of a board with numbered circles thereon and rings which are to be spun on the board, whereby, when the spinning ceases, the rings may drop on the circles or outside of the same, thus providing an interesting game.

The figure represents a perspective view of a game embodying my invention.

Referring to the drawing, A designates a board which may be pasteboard, card-board, wood, or other suitable material sufficiently rigid so that it may lie flat on a table or other support. On the upper face of the board are printed or otherwise marked a series of differently-colored circles B, which are systematically disposed and numbered, in the present case, in decimals. At the corners of the board are spots C, numbered "90;" but it is evident that letters of the alphabet may be substituted for the several numbers.

D designates a series of rings, formed of wood or other material, which are severally colored to accord with the colors of the circles B. A player spins his ring, and when the spinning ceases the ring drops on the board, it may be on a circle of its own color, which counts double, or partly on two or three other circles, the aggregate of whose numbers count for the player; but the ring may drop on either of the corner-spots C or on a blank space of the board, the counting of which may be according to established rules. While the circles shown are preferred, they may be substituted by squares or other geometric figures.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A game consisting of a board with numbered circles thereon, and spinning-rings, the combination and operation being substantially as described.

MARY A. GREENE.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. JENNINGS.

(No Model.)

C. DEINER.
ROLLING PIN.

No. 448,476.

Patented Mar. 17, 1891.

Fig. 1.

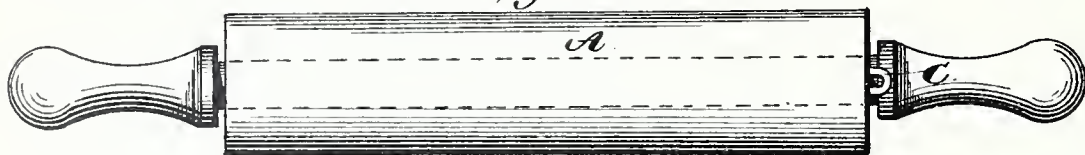


Fig. 2.

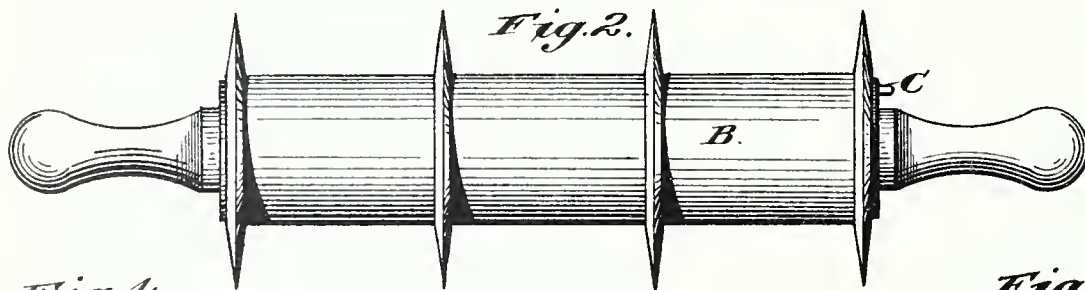


Fig. 4.

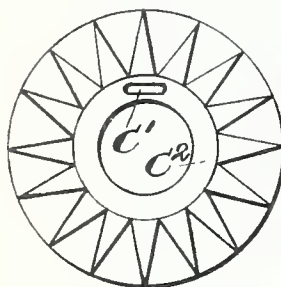


Fig. 5.

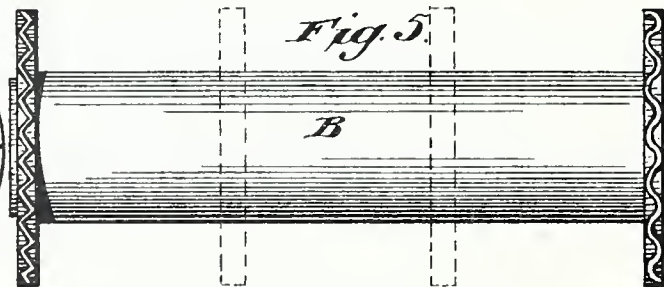


Fig. 3.

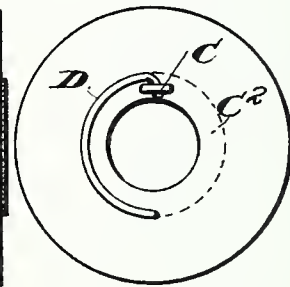


Fig. 6.

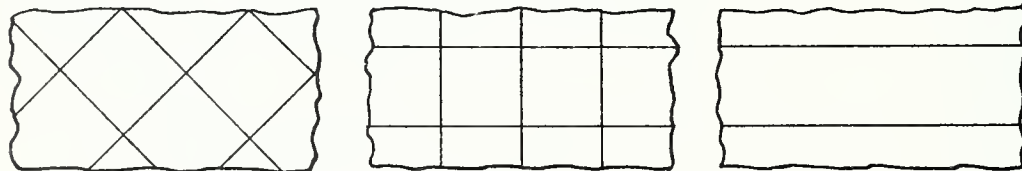


Fig. 7.

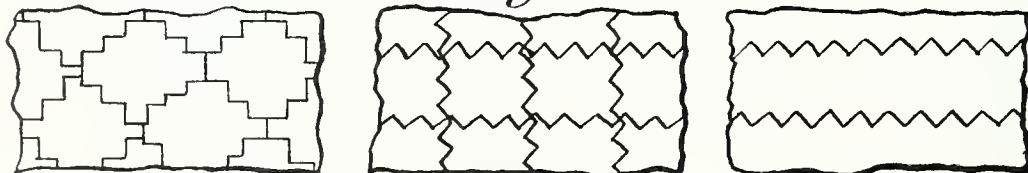
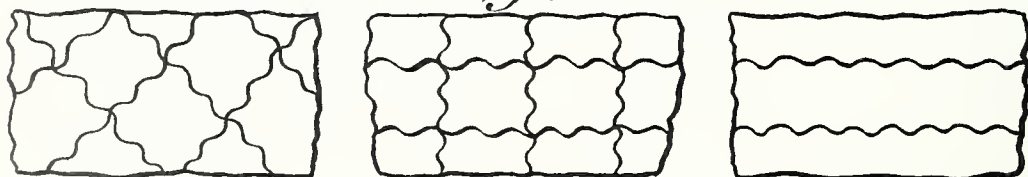


Fig. 8.



Witnesses

Johas Reinisch
Amanda Widmayer

Inventor

Catharine Deiner
per B. B. Schuman
Att'y

UNITED STATES PATENT OFFICE.

CATHARINE DEINER, OF LEBANON, PENNSYLVANIA.

ROLLING-PIN.

SPECIFICATION forming part of Letters Patent No. 448,476, dated March 17, 1891.

Application filed March 10, 1890. Serial No. 343,416. (No model.)

To all whom it may concern:

Be it known that I, CATHARINE DEINER, a citizen of the United States, residing at Lebanon, in the county of Lebanon, State of Pennsylvania, have invented a new and useful Improvement in Rolling-Pins; which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to an attachment to a rolling-pin, by which dough, &c., may be cut into various shapes and forms; and it consists of a cutter-carrying sleeve adapted to be fitted on the rolling-pin and provided with an annular rim or flange, which acts as a stop for primarily limiting the entrance of the rolling-pin into the sleeve, and is formed with an opening to receive an eye or loop on the pin, said eye receiving a spring-catch for connecting the sleeve and rolling-pin as one.

Figure 1 represents an elevation of a rolling-pin with a portion of my invention applied thereto. Figs. 2 and 5 represent similar views of rolling-pins with variously-formed cutters thereon. Fig. 3 represents an end view of a rolling-pin, showing the fastening device. Fig. 4 represents an end view of a zigzag cutter. Figs. 6, 7, and 8 illustrate, on a reduced scale, different forms and effects produced by the cutters in dividing the sheets of dough into variously-shaped parts and pieces.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a rolling-pin, upon which is mounted a sleeve B, provided with cutters which may have straight, fluted, or circular cutting-edges.

To one end of the body of the rolling-pin is attached a loop or eye C, which projects therefrom and enters the slot or opening C' in the annular rim or flange C², the latter being formed on the end of the sleeve and adapted to have the handle of the rolling-pin passed

through the same, so that said handle is in position for operation.

D designates a spring-catch, one end of which is attached to the sleeve and the other end adapted to enter the eye C, by which provision longitudinal displacement of the sleeve from the rolling-pin is prevented.

It will be seen that when the sleeve is inserted over the rolling-pin or the latter fitted into the sleeve, the rim or flange C² primarily limits the entrance of the rolling-pin into the sleeve. The eye C also passes through the slot C' of said rim or flange, when it is engaged by the catch D, said eye thus receiving the strain when the device is in use and preventing the shifting of the sleeve around the rolling-pin, it being noticed that longitudinal displacement of the sleeve is prevented by the spring-catch.

When the handles of the rolling-pin are grasped, the cutters may be rolled over the dough, &c., the effect of which is evident. It is also evident that the sleeve, with its attached cutters, may be readily removed from the rolling-pin by disconnecting the catch from the eye and then disengaging the sleeve and rolling-pin one from the other, the rolling pin, as such, being serviceable for work of its kind.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A rolling-pin having a loop or eye on the end thereof, in combination with an encircling sleeve having a cutter thereon, and a spring-catch engaging said eye, the sleeve being provided at its ends with a flange, which is formed with an opening through which said eye projects, substantially as described.

CATHARINE DEINER.

Witnesses:

TOBIAS REINOEHL, Sr.,
AMANDA WIDMAYER.

(No Model.)

M. E. BEASLEY.

PROCESS OF NOTCHING AND CUTTING HOOPS FOR BARRELS.

No. 448,905.

Patented Mar. 24, 1891.

FIG. 1.

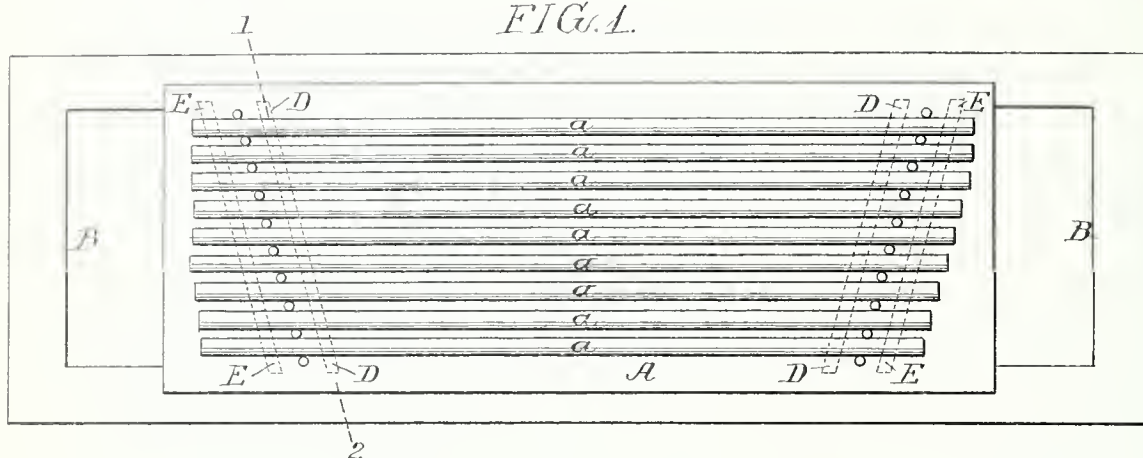


FIG. 2.

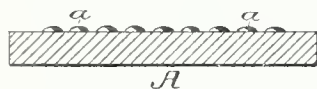


FIG. 3.

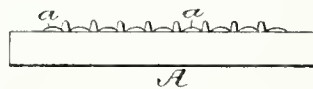


FIG. 4.

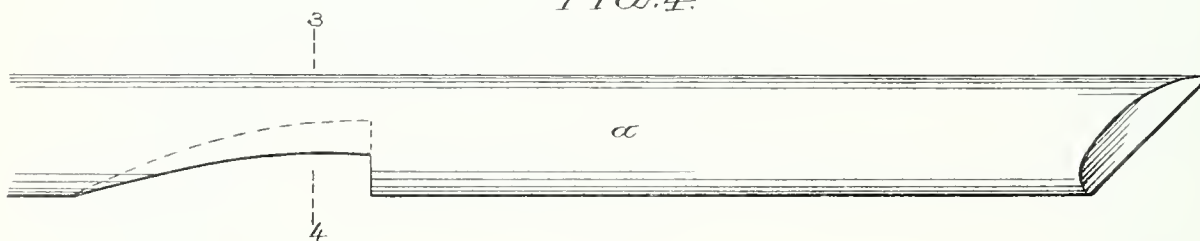


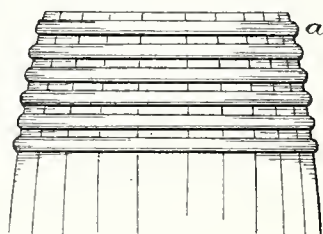
FIG. 6.



FIG. 5.



FIG. 7.



Witnesses:
Alex. Darkoff
Murray C. Boyer

Inventor:
Maria E. Beasley
by her Attorneys
Howson & Howson

UNITED STATES PATENT OFFICE.

MARIA E. BEASLEY, OF PHILADELPHIA, PENNSYLVANIA.

PROCESS OF NOTCHING AND CUTTING HOOPS FOR BARRELS

SPECIFICATION forming part of Letters Patent No. 448,905, dated March 24, 1891.

Application filed February 8, 1890. Serial No. 339,706. (No model.)

To all whom it may concern:

Be it known that I, MARIA E. BEASLEY, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented an Improved Process of Notching and Cutting Hoops for Barrels, of which the following is a specification.

The object of my invention is to cut and notch a series of barrel-hoops simultaneously, whereby a full set of hoops for one end of a barrel is prepared, ready and in order for the cooper to place in position on the barrel.

In the accompanying drawings, Figure 1 is a plan view of the cutting-table, showing the hoops in position, the knives being shown by dotted lines. Fig. 2 is a section on the line 1 2, Fig. 1. Fig. 3 is an end view. Fig. 4 is an enlarged plan view of one end of a hoop. Fig. 5 is a section on the line 3 4, Fig. 4. Fig. 6 is a side view of one of the hoops, and Fig. 7 is a view of a hooped barrel.

My process of cutting hoops is carried out mainly in preparing hoops for pork and fish barrels. These barrels have a number of hoops upon each end, generally arranged side by side. These hoops have heretofore been notched by hand and when they are undercut, as shown in Fig. 5, it is very tedious work and also expensive, the hoops being cut and notched singly; but by my process the series of hoops for each end are cut with one stroke, and the hoops after cutting are in regular order to be placed by the cooper upon the barrel.

In carrying out my process a machine may be used constructed in accordance with the drawings and description set forth in an application for patent for hoop-cutting machine by Beasley and Allen, Serial No. 364,639.

Referring to Fig. 1 of the drawings, A is the cutting-table, mounted upon a suitable bed B. On this table are placed the hoop-blanks *a* to be cut. Clamps may be used to hold the several hoops in position, if required, and spac-

ing-pins may be used, as clearly shown in Fig. 1.

The cutting-knives D for notching the hoops are shown by dotted lines and are inclined to the bilge of the barrel. The cutting-off knives E are at a similar incline, so that the hoops intended for the bilge will be longer than the ones intended for the end of the barrel. I prefer to cut the hoops at an incline, so as to form an undercut notch and sever the hoop at an angle, so that when the ends are clinched together they will be secure and have a neat appearance. By altering the angle of the knife-bars the hoops of barrels of different bilge and diameter may be readily cut.

A single knife may be used to sever the hoops; but I use a series of knives to form the notches, which are preferably undercut.

I claim as my invention—

1. The process herein described of notching hoops, said process consisting, first, in placing the hoop-blanks to be cut in line upon a table; second, arranging the angle of the notching-knife bar to the bilge of the barrel, and, third, cutting the notches in the series of hoops simultaneously, substantially as set forth.

2. The process herein described of notching and cutting hoops, said process consisting in, first, arranging the hoops for one end of a barrel upon the cutting-table; second, arranging the notching and cutting knives at the proper angle for the bilge of the barrel, and, third, severing the hoops on said angle simultaneously, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MARIA E. BEASLEY.

Witnesses:

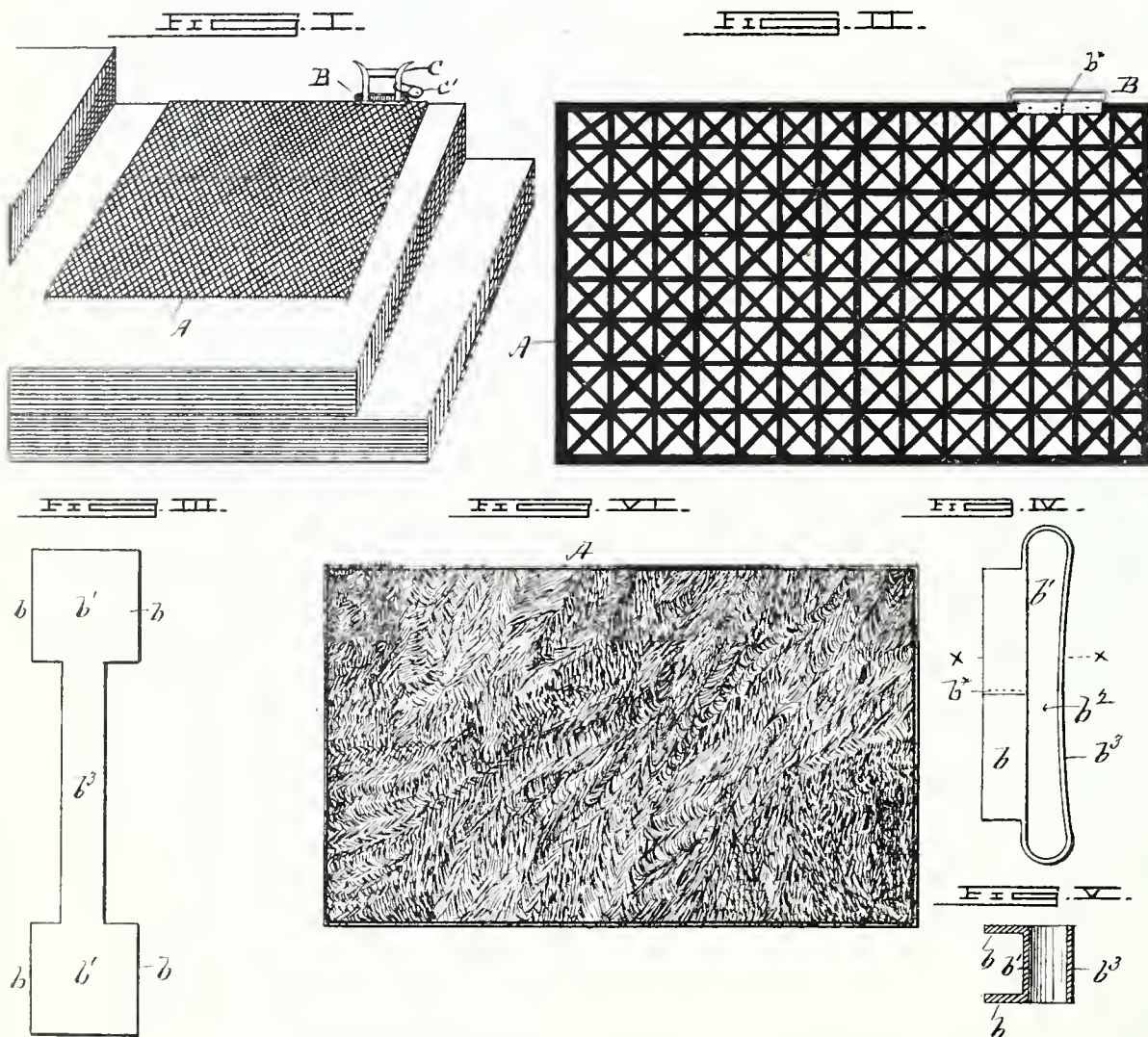
JNO. E. PARKE,
JOS. H. KLEIN.

(No Model.)

L. H. CLAMER.
FASTENING DEVICE FOR DOOR MATS.

No. 451,633.

Patented May 5, 1891.



Witnesses:-
A. B. Buhman.
Chas. S. Ketch.

Inventor:-
Luisa H. Clamer,
By Atty J. W. Ketch.

UNITED STATES PATENT OFFICE.

LOUISA H. CLAMER, OF PHILADELPHIA, PENNSYLVANIA.

FASTENING DEVICE FOR DOOR-MATS.

SPECIFICATION forming part of Letters Patent No. 451,633, dated May 5, 1891.

Application filed January 24, 1889. Serial No. 297,372. No model.

To all whom it may concern:

Be it known that I, LOUISA H. CLAMER, a citizen of the United States, residing at Philadelphia, (No. 1925 Columbia avenue,) in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Fastening Devices for Door-Mats; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to devices for fastening door-mats to foot-scrapers and other protruding parts at steps, in vestibules, hallways, &c.; and the object of the invention is to provide a device which will hold the mat from displacement by use in cleaning the feet and at the same time afford a partial locking means for the mat to prevent its being picked up and carried off by thieves.

The fastener is made of metal or any other suitable material, and the loop can be made to fit snugly upon the scraper with sufficient elastic pressure to hold the mat with some force and to prevent it from being readily picked up by sneak thieves. If desired, a lock may be placed upon the scraper above the loop of the fastener to securely lock the mat.

The following detailed description will more fully disclose the nature and purpose of my said invention and the manner in which I construct and use the same.

The accompanying drawings illustrate what I consider the best means for carrying my invention into practice.

Figure I is a perspective view of a mat with a fastener in use over a scraper. Fig. II is a plan view of a mat with a separately-formed fastener attached. Fig. III is a view of a blank from which the fastener is made. Fig. IV is a plan of the fastener detached. Fig. V is a section of Fig. IV on line X X. Fig. VI is a plan view of a woven mat, to which the fastening is to be applied.

Similar letters of reference indicate corre-

sponding parts in all the figures where they occur.

A is a mat. In the drawings a rubber or woven mat is indicated; but it will be understood that any sort of mat can be used with my fastener.

C is the scraper.

B is my fastener.

The fastener is a single separate piece formed with jaws or horizontal wings b , between which an edge of the mat is placed, and rivets are put through the jaws and mat, thereby securing the fastener and mat together. The back b' , with which the jaws b are formed, is carried around from end to end and forms the loop b^2 , which is to pass over and encompass the scraper. The side b^3 of the loop may be made with an elasticity which presses it inward against the rear side of the scraper with sufficient force to prevent the mat from readily being removed from the scraper, particularly so when the top of the scraper is of greater thickness than the bottom, which is frequently the case.

If desired, to entirely prevent surreptitious and unauthorized removal of the mat, I may provide a padlock, as C' , the bail of which is locked through an opening in the scraper and securely holds the mat against removal.

The fastener is preferably produced in one integral piece from a blank, such as is shown in Fig. III, which, after having the jaws or wings struck up at right angles to the blank, is bent to form the loop b^2 and joined by riveting, soldering, or otherwise, as shown at b^* , Figs. II and IV.

With this device secured to a mat and placed over a scraper the mat will be held against displacement by use, and will afford a substantially fixed surface on which to wipe the feet, thus increasing the utility of the mat and the convenience of the user, while rendering the operation of cleaning the boots much more expeditious. At the same time it to a great extent removes the temptation which a loose unattached mat presents to sneak thieves and vagrants, and may be made to afford a complete prevention against unauthorized removal by use of the lock, as described.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

5 The herein-described fastening for mats, consisting of a single piece of sheet metal having the back *b'* to rest against the edge of the mat and the jaws *b b* extending outward from the back to clamp the upper and lower surfaces of the mat, and an integral loop ex-

tending from the ends of the back for en- 10 gagement with a scraper.

In testimony whereof I affix my signature in presence of two witnesses.

LOUISA H. CLAMER.

Witnesses:

F. T. CLARK,

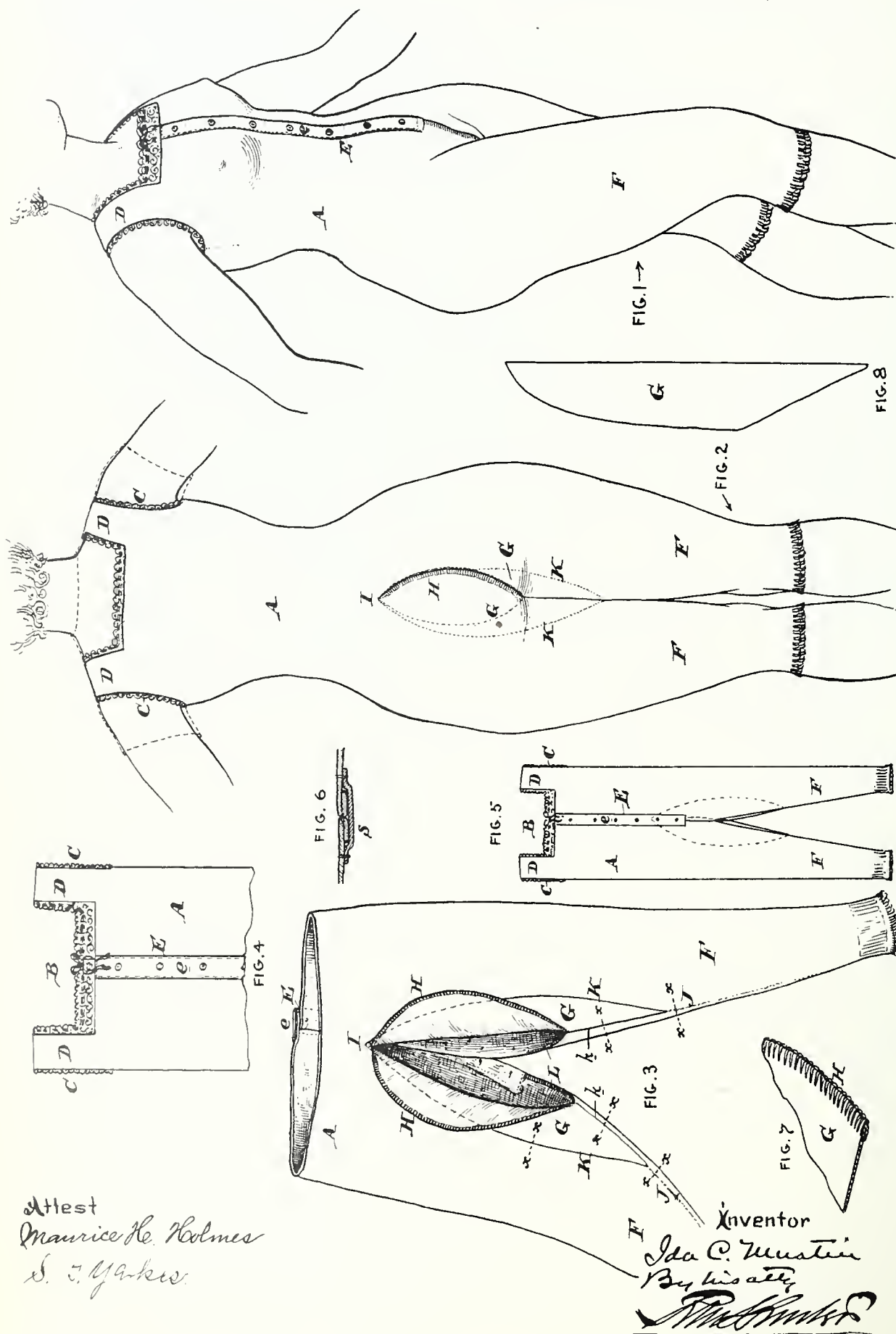
C. H. MENTZER, Jr.

(No Model.)

I. C. MUSTIN.
COMBINATION UNDER GARMENT.

No. 462,913.

Patented Nov. 10, 1891.



Attest
Maurice H. Holmes
S. J. Parker

Inventor
Ida C. Mustin
By his atty
The Banker

UNITED STATES PATENT OFFICE.

IDA C. MUSTIN, OF PHILADELPHIA, PENNSYLVANIA.

COMBINATION UNDER-GARMENT.

SPECIFICATION forming part of Letters Patent No. 462,913, dated November 10, 1891.

Application filed July 14, 1890. Serial No. 358,706. (No model.)

To all whom it may concern:

Be it known that I, IDA C. MUSTIN, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Under-Garments for Ladies, of which the following is a specification.

My invention has reference to under-garments for ladies; and it consists of certain improvements, which are fully set forth in the following specification, and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to produce an improved under-garment for ladies' use, which shall comprise the shirt portion and drawers in one structure, and in which the leg portions may be short so as to envelop the limbs only to a point immediately below the knees or extend lower down to the ankles. The garment is adapted to be made either with high neck and short sleeves, or low neck with or without sleeves. The garment is also open down the front with provision for securing the opening by means of buttons or equivalent means, and from the abdomen down between the leg portions and up to the small of the back or in the neighborhood of the waist portion the garment is made open, having no means but the natural fitting to the wearer to maintain the two edges of the opening in lapped position. My invention has particular reference to the structure or formation of this opening where it is connected to the rear portion of the garment in the neighborhood of the small of the back or waist portion, and is clearly shown in the accompanying drawings, in which—

Figure 1 is a perspective view illustrating my improved garment applied to a wearer, looking toward the front portion. Fig. 2 is a rear elevation of same. Fig. 3 is a perspective view of the lower portion of the garment removed from the wearer, for the purpose of illustrating more nearly the structural characteristics. Fig. 4 is a front elevation of the upper or shoulder portion of the garment. Fig. 5 is a front elevation of the garment laid out flat before being fitted to the figure. Fig. 6 is a cross-section through the seams on line *x x* of Fig. 3. Fig. 7 is a perspective view of one of the edges of the opening in the gar-

ment; and Fig. 8 is a plan view of one of the pieces which is secured to the rear portions of the lower part of the garment to produce the necessary shape, fullness, and material for forming the rear covering at the seat of the garment.

A is the body of the garment, and has its upper portion cut out, as at B, to form a low-neck garment, and has also slits formed in the edges of the tubular material of which the body A is formed to constitute the armholes C, leaving the wide shoulder portions D between the armholes C and the low-necked portion B.

The garment is formed of knitted fabric excellently adapted to stretch in all directions to fit the form snugly, as clearly illustrated in Figs. 1 and 2. The arm-holes C, instead of being cut by deep notches, as has been customary, are formed by simple slots through one vertical line of loops and then bound by elastic stitching. The shoulder-pieces D are united at the top, so as to fit snugly to the shoulder. Lace or other ornamentation may be placed about the low-necked portions and armholes, if desired.

The front of the garment is open, as at E, and the edges are bound, as at *e*, and provided with buttons, so that from the abdomen to the throat the garment may be secured together and the juncture held close and tightly fitting. From the abdomen down and upward in the rear to the small of the back or waist portion the garment is made open and depends upon the fit to the form to insure the edges L of this opening to remain in contact and protect the person of the wearer.

The leg portions F of the garment are formed by cutting the tubular fabric in the shape shown in Fig. 5 and securing the inner edges by seams extending from the lower portion part way up toward the opening L. The leg portions may be long or short, as desired. Pieces G of the shape shown in Fig. 8 are secured to the tube so shaped by seams *k* and *K*, (see Fig. 3,) said pieces giving the fullness necessary for the seat of the garment and the proper fitting about the upper portion of the limbs. The two pieces G, which are attached to the respective leg portions F, have their seams *K* united at the apex of the opening at

I, and the free portions of said parts G, bound-
 ed by the edges II, are loose and form flaps,
 which are so constituted that for all move-
 ments of the wearer these flaps will give, and
 yet at all times maintain a covering to the
 body of the wearer, preventing exposure at any
 time, thus producing an exceedingly warm
 and comfortable garment. One of the essen-
 tial parts of my invention lies in the peculiar
 shape of this juncture of the parts G with re-
 spect to each other and the body portion of
 the garment, and depends upon the fact that
 the curved edges II of these portions G have
 no connection whatever with each other or
 with the body of the garment until they meet
 at the extreme upper point I of the opening.
 It is evident that by uniting the edges II in
 a given point I either flap of the part G may
 be brought to the outside, thus giving the
 wearer the privilege of selecting the flap which
 shall come next to the skin, according as to
 whether the wearer is right or left handed.
 The opening L in the front portion below the
 abdomen and the edge II of the flap portions
 of the parts G are formed with the edges
 folded over and bound with an elastic stitch,
 as indicated in Fig. 7, whereby the edges of
 the garment are made so as to permit reason-
 able movement even after the garment is
 tightly fitted to the form. An elastic binding
 of this nature is most desirable.

Any movement of the limbs cannot possi-
 bly drag the garment out of shape, since at
 no place along the edge II of the flaps is there
 an attachment to either the tube portion or
 the opposing flap, and consequently there can
 be no dragging upon any portion of the gar-
 ment from the greatest movement of the
 limbs of the wearer. As the parts G and flap
 portions at the rear are united in a single
 point the leg portions of the garment at the
 rear are permitted to move about this point
 with utmost freedom without the least tend-
 ency of rupturing the garment.

If desired, the seams K k and portions of
 the seams of the leg portions F (designated
 by the letters J) are formed as indicated in
 Fig. 6, in which the two parts of the knitted
 fabric are united by a line of stitching, the
 free edges laid flat, and the seam covered by
 a strip of silk tape or other material S, stitched
 down at its free edges, whereby great strength

with comfortable feeling to the wearer is the
 result.

Having now described my invention, what
 I claim as new, and desire to secure by Let-
 ters Patent, is—

1. A lady's under-garment consisting of a
 body and leg portion formed of knitted fabric
 in one integral piece without seams down the
 back and formed with a continuous opening
 from the abdomen down between the leg por-
 tions and up to the small of the back or waist
 portion in the rear and having the edges of
 the rear portions of the leg parts provided
 with independent pieces or loose flaps G, sub-
 stantially of the shape shown, secured there-
 to by seams K and k, the said parts G being
 formed with curved free edges II, adapted to
 lap over each other when worn, but uncon-
 nected with the body portion, and in which
 the said edges II meet at the upper end of the
 opening in the back and are united to the
 body part at a point whereby either edge II
 may be drawn over the other.

2. An under-garment for ladies, consisting
 of body and leg portions formed of knitted
 fabric in one piece with an opening from the
 neck down the front and up to the small of
 the back or waist in the rear, the said open-
 ing being provided with means for fastening
 the edges from the neck to the abdomen and
 in which the edges of the opening adjacent
 to the small of the back or waist are made
 full and elastic and are united to the body of
 the fabric at a single point at the apex of the
 opening, so that either elastic edge may be
 drawn over the other.

3. An under-garment for ladies, consisting
 of a body and leg portion formed of an inte-
 gral tube of knitted fabric in which the neck
 portion is cut down and a single row of loops
 of the fabric on diametrically-opposite sides
 are cut to form armholes, the fabric between
 the armholes and neck portion being united
 at the shoulder part to form wide shoulder-
 straps entirely covering the shoulder portion
 adjacent to the arm.

In testimony of which invention I have
 hereunto set my hand.

IDA C. MUSTIN.

Witnesses:

R. M. HUNTER,

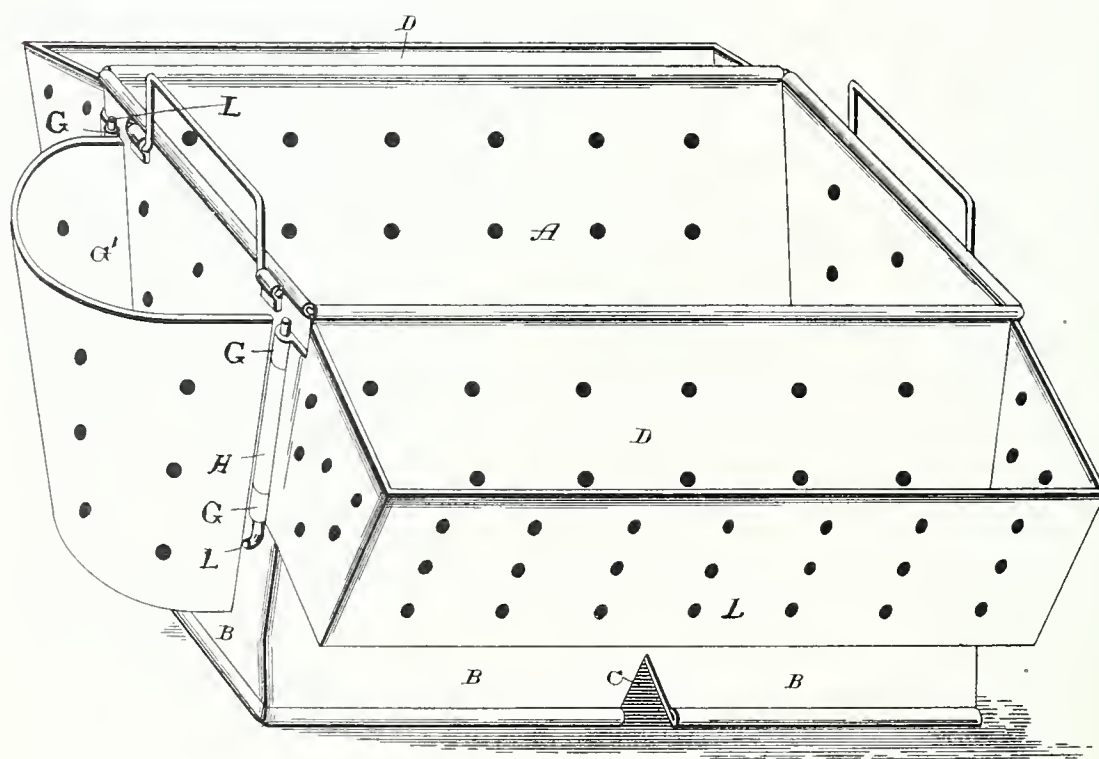
ERNEST HOWARD HUNTER.

(No Model.)

A. M. JAYNE.
DRAIN FOR DISHES.

No. 463,056.

Patented Nov. 10, 1891.



Witnesses:

E. P. Ellis,
P. Brockell,

Inventor.
Mrs. Alice M. Jayne
per
Lehmann & Patterson,
attys

UNITED STATES PATENT OFFICE.

ALICE M. JAYNE, OF BRADFORD, PENNSYLVANIA.

DRAIN FOR DISHES.

SPECIFICATION forming part of Letters Patent No. 463,056, dated November 10, 1891.

Application filed February 27, 1891. Serial No. 383,110. (No model.)

To all whom it may concern:

Be it known that I, ALICE M. JAYNE, of Bradford, in the county of McKean and State of Pennsylvania, have invented certain
5 new and useful Improvements in Drains for Dishes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make
10 and use it, reference being had to the accompanying drawing, which form part of this specification.

My invention relates to an improvement in drains for dishes; and it consists in a perforated vessel or holder of the construction hereinafter shown and described.

The object of my invention is to provide a perforated vessel or holder of the construction hereinafter specified, in which the dishes
20 are to be placed either after they are washed to drain or in which they may be placed and then have hot water poured over them and then left to dry.

The accompanying drawing represents a
25 perspective of a drain which embodies my invention.

A represents a vessel or holder of any desired shape or size and which is made preferably of perforated sheet metal, though I do
30 not desire to limit myself in this respect, for it will be readily understood that any suitable apertured material may be substituted therefor. As the bottom and various sides and ends of this vessel are perforated in order to
35 allow the water that drains off from the washed dishes to escape, a flange B is formed all around the bottom of the holder, so as to raise it above the support upon which it is placed, and through this flange are made openings C,
40 through which the water freely escapes.

Secured to opposite sides of the vessel A are the two compartments D, which have outwardly-inclined sides L, so that the articles placed in them will incline away from the
45 perforated sides of the vessel A. The compartments are not provided with an inner wall, but have the inner edges of their ends rest upon the outer sides of the vessel A,

which latter form the inner walls of the said compartments. These compartments are preferably detachably connected to the vessel A by means of the eyes G, formed upon the inner edges of the ends of the compartments, the eyes H, formed upon the ends of the vessel A, and the removable pivotal rods I, which
55 pass through the said eyes. By means of this construction the compartments can be quickly and readily detached from the vessel A for the purpose of allowing free access to the perforations made in the sides of the vessel A for cleaning them or for any other reason. As the compartments have open inner sides, free access is given to the inner sides of them for the purpose of cleaning
65 when they are detached from the vessel A. In these compartments D it is intended to place the small articles of china, so that they are less liable to be broken than if placed in the vessel A together with the large and heavy articles, and these compartments are made
70 shallower than the vessel A, so that they will not interfere with the outflow of water through the openings C and because it is not necessary to make them deep, since only small articles are to be placed in them.

At one end of the compartment or vessel A is secured a small compartment G', in which it is intended to place the knives, forks, and spoons. This compartment, like the compartments D, has an open inner side, but is
80 preferably secured permanently to the vessel A.

After the dishes have been washed they are placed wet in the holder and then left to dry without the necessity for using a towel
85 upon them. If it is not desired to wash the dishes by hand, the hot water is poured over them while the holder is placed in a dish-pan or sink until the dishes are washed clean. By lifting the holder out of the pan with all the
90 dishes in it the dishes dry without any further trouble.

Having thus described my invention, I claim—

1. In a drain for dishes, the perforated body portion and detachable compartments

secured at their ends to the body portion, the parts being combined substantially as shown and described.

2. A drain for dishes comprising a main
5 apertured vessel, and small apertured compartments having open inner sides, the inner edges of the ends of the compartments having eyes secured to the ends of the main vessel and pivoted rods which pass through the
10 said eyes, whereby the compartments are de-

tachably connected to the vessel, substantially as shown, and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

ALICE M. JAYNE.

Witnesses:

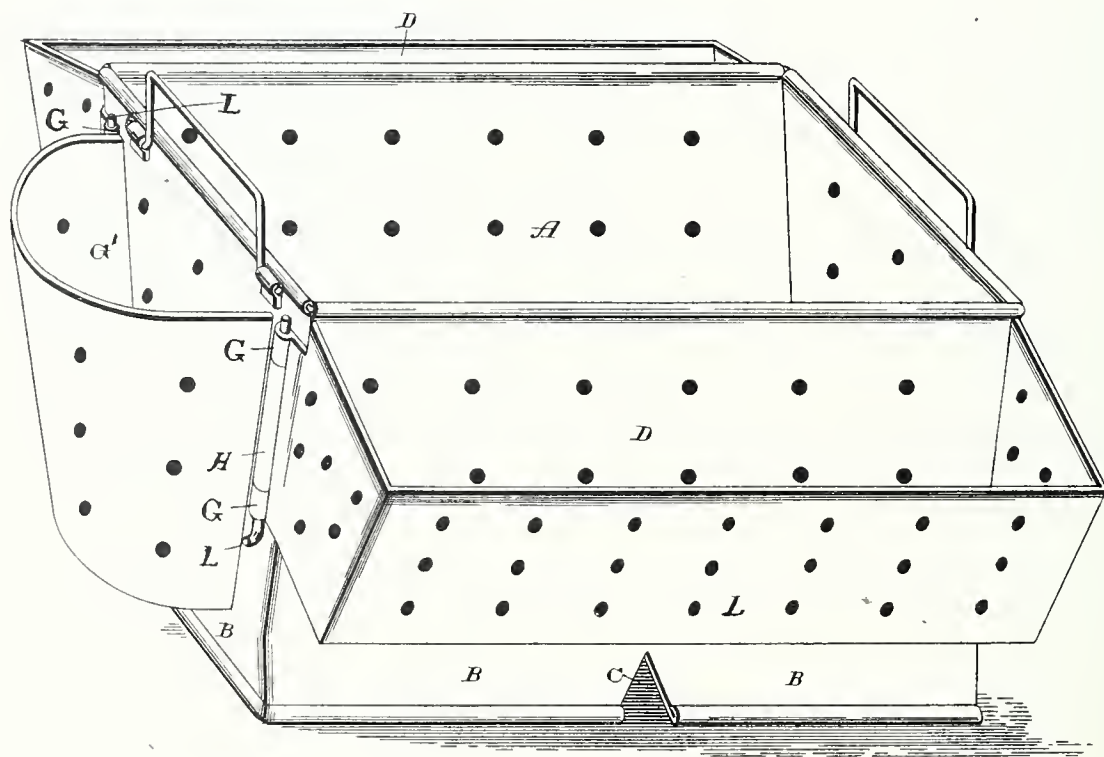
M. H. RYLE,
H. H. NORTH.

(No Model.)

A. M. JAYNE.
DRAIN FOR DISHES.

No. 463,056.

Patented Nov. 10, 1891.



Witnesses:

E. P. Ellis,
Ed. Brockell,

Inventor.
Mrs. Alice M. Jayne
per
Lehmann & Patterson
attys

UNITED STATES PATENT OFFICE.

ALICE M. JAYNE, OF BRADFORD, PENNSYLVANIA.

DRAIN FOR DISHES.

SPECIFICATION forming part of Letters Patent No. 463,056, dated November 10, 1891.

Application filed February 27, 1891. Serial No. 383,110. (No model.)

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10 and use it, reference being had to the accompanying drawing, which form part of this specification.

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20 are to be placed either after they are washed to drain or in which they may be placed and then have hot water poured over them and then left to dry.

The accompanying drawing represents a
25 perspective of a drain which embodies my invention.

A represents a vessel or holder of any desired shape or size and which is made preferably of perforated sheet metal, though I do
30 not desire to limit myself in this respect, for it will be readily understood that any suitable apertured material may be substituted therefor. As the bottom and various sides and ends of this vessel are perforated in order to
35 allow the water that drains off from the washed dishes to escape, a flange B is formed all around the bottom of the holder, so as to raise it above the support upon which it is placed, and through this flange are made openings C,
40 through which the water freely escapes.

Secured to opposite sides of the vessel A are the two compartments D, which have outwardly-inclined sides L, so that the articles placed in them will incline away from the
45 perforated sides of the vessel A. The compartments are not provided with an inner wall, but have the inner edges of their ends rest upon the outer sides of the vessel A,

which latter form the inner walls of the said compartments. These compartments are preferably detachably connected to the vessel A
50 by means of the eyes G, formed upon the inner edges of the ends of the compartments, the eyes H, formed upon the ends of the vessel A, and the removable pivotal rods I, which
55 pass through the said eyes. By means of this construction the compartments can be quickly and readily detached from the vessel A for the purpose of allowing free access to the perforations made in the sides of the
60 vessel A for cleaning them or for any other reason. As the compartments have open inner sides, free access is given to the inner sides of them for the purpose of cleaning
65 when they are detached from the vessel A. In these compartments D it is intended to place the small articles of china, so that they are less liable to be broken than if placed in the vessel A together with the large and heavy
70 articles, and these compartments are made shallower than the vessel A, so that they will not interfere with the outflow of water through the openings C and because it is not necessary to make them deep, since only small articles are to be placed in them.

At one end of the compartment or vessel A is secured a small compartment G', in which
75 it is intended to place the knives, forks, and spoons. This compartment, like the compartments D, has an open inner side, but is preferably secured permanently to the vessel A.

After the dishes have been washed they are placed wet in the holder and then left to
85 dry without the necessity for using a towel upon them. If it is not desired to wash the dishes by hand, the hot water is poured over them while the holder is placed in a dish-pan or sink until the dishes are washed clean. By
90 lifting the holder out of the pan with all the dishes in it the dishes dry without any further trouble.

Having thus described my invention, I claim—

1. In a drain for dishes, the perforated
95 body portion and detachable compartments.

secured at their ends to the body portion, the parts being combined substantially as shown and described.

2. A drain for dishes comprising a main
5 apertured vessel, and small apertured compartments having open inner sides, the inner edges of the ends of the compartments having eyes secured to the ends of the main vessel and pivoted rods which pass through the
10 said eyes, whereby the compartments are de-

tachably connected to the vessel, substantially as shown, and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

ALICE M. JAYNE.

Witnesses:

M. H. RYLE,

H. H. NORTH.

(No Model.)

K. F. TAYLOR.
VEGETABLE MASHER.

No. 456,863.

Patented July 28, 1891.

Fig. 1.

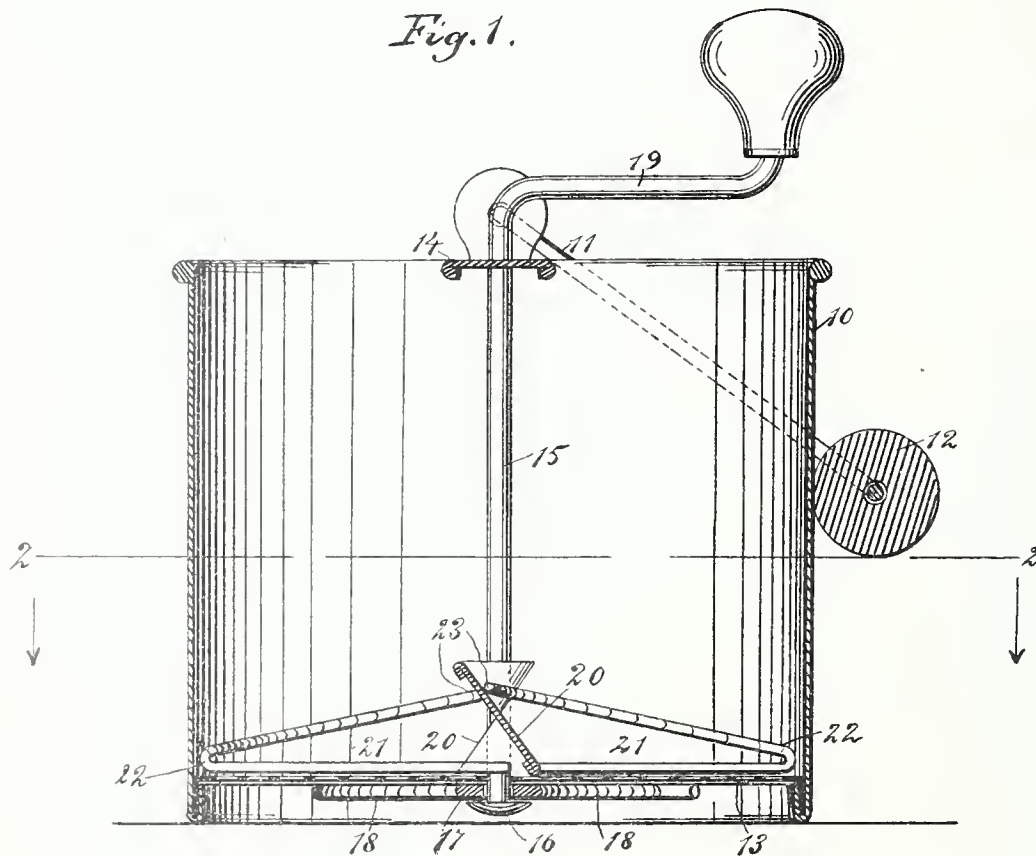
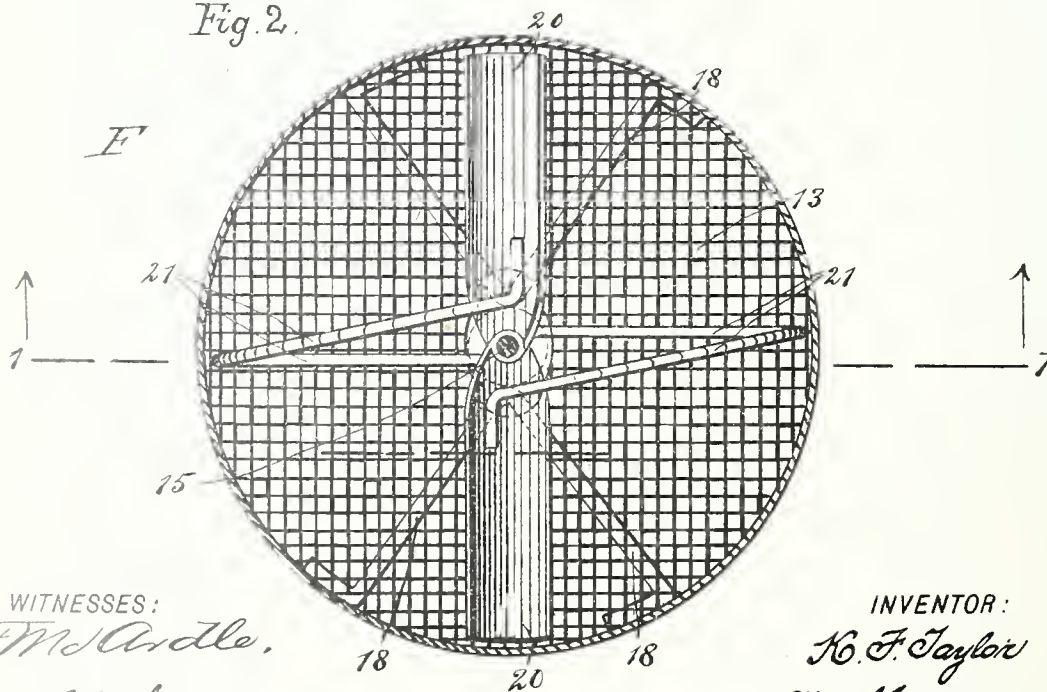


Fig. 2.



WITNESSES:

A. M. Ardle,
E. M. Clark

INVENTOR:

K. F. Taylor
BY *Munn & Co*
ATTORNEYS

UNITED STATES PATENT OFFICE.

KATE F. TAYLOR, OF SMETHPORT, PENNSYLVANIA.

VEGETABLE-MASHER.

SPECIFICATION forming part of Letters Patent No. 456,863, dated July 28, 1891.

Application filed March 28, 1891. Serial No. 386,826. (No model.)

To all whom it may concern:

Be it known that I, KATE F. TAYLOR, of Smethport, in the county of McKean and State of Pennsylvania, have invented a new and Improved Vegetable-Masher, of which the following is a full, clear, and exact description.

My invention relates to improvements in vegetable-mashers; and the object of my invention is to produce a simple and convenient device in which the vegetables may be cooked and which will mash them smoothly and quickly after they are cooked.

To this end my invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in both views.

Figure 1 is a vertical section of the device on the line 1 1 in Fig. 2, and Fig. 2 is a sectional plan on the line 2 2 in Fig. 1.

The body of the masher consists of a cylinder 10, which is open at the top, is provided with a bail 11 and handle 12, and is partially closed at the bottom by a sieve 13. A cross-bar 14 extends across the top of the body, and in this cross-bar is mounted a vertical rod 15, the lower end of which extends through the sieve and terminates in a button 16, which prevents the displacement of the rod, and the button is arranged beneath a support 17, which serves to steady the rod, and the support 17 is formed on the inner ends of the arms 18, the outer ends of the arms being secured to the body 10. The upper end of the rod 15 is formed into a crank 19, by means of which the rod may be turned. Near the lower end of the rod 15 is a blade 20, which is secured to the rod, and which is composed of flat metal doubled over at the upper and lower edges. The blade 20 is inclined in opposite directions on each side of the rod 15, so that when the rod is turned the inclines of the blade will have a tendency to ride over the vegetables and mash them between the lower edge of the blade and the sieve. On

each side of the blade 20 and at right angles to the same are rods 21, which rub against the sieve, and which extend to the body of the masher and are doubled upon themselves at 22, and then bend inward and terminate at 23, at which point they are secured to the upper portion of the blade 20. It will thus be seen that the rods 21 and the blade 20, being arranged at right angles, will form four radially-extending rubbers, which will all bear simultaneously upon the sieve 13.

The vegetables which are to be mashed in the masher are placed therein and the rod 15 rapidly rotated by means of the crank 19, and the rods 21 and blade 20 will mash the vegetables finely and force them through the sieve 13. If desired, the vegetables may be placed in the masher in a raw state, and the masher may then be placed in a kettle of boiling water, so that the vegetables will be boiled within it, and when the masher is lifted from the water the vegetables will be quickly and thoroughly drained.

The masher is especially adapted for mashing potatoes, as it will rub them as smooth as cream; but it is obvious that any kind of vegetables may be quickly mashed by it.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A vegetable-masher comprising a cylindrical body having a sieve in the bottom and a cross-bar at the top, a handled rod extending downward through the cross-bar and having its lower end held in a suitable support, a blade secured to the rod and adapted to press upon the sieve, said blade having its ends oppositely inclined, and rods arranged at right angles to the blade and adapted to press upon the sieve, substantially as described.

2. In a vegetable-masher, the combination, with a cylindrical vessel having a sieve in its bottom, of a handle-rod mounted in the vessel, a blade secured to the lower end of the rod and inclined in opposite directions on each side of the said rod, and rods projecting at right angles from the lower portion of the blade extending nearly to the side of the ves-

sel, then doubled upon themselves, and secured to the upper portion of the blade, substantially as described.

5 3. In a vegetable-masher, the combination, with a vessel having a sieve in its bottom, of a support below the sieve and provided with arms extending to the vessel, a cross-bar at the top of the vessel, a handle-rod mounted

in said bar and support, and radially-extending rubbers secured to the lower end of the handle-rod, substantially as shown and described. 10

KATE F. TAYLOR.

Witnesses:

JOHN N. APPLE,
HAMILTON T. HILL.

(No Model.)

M. A. NORTHRUP.
DEVICE FOR FASTENING BUTTONS.

No. 458,110.

Patented Aug. 18, 1891.

Fig 2.

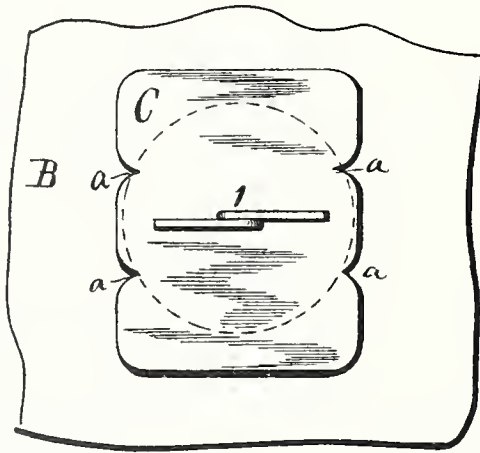


Fig 3

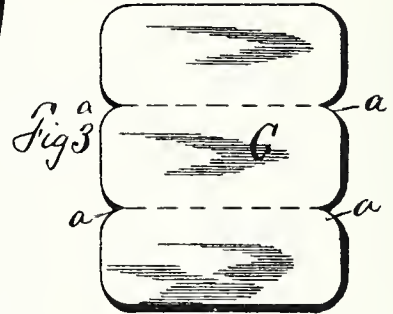


Fig 1.

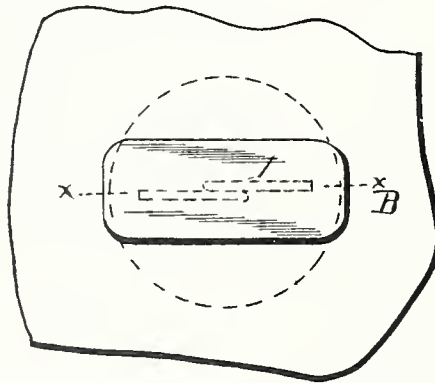


Fig 4

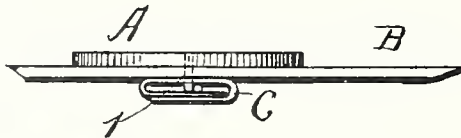


Fig 5



Fig 6.

WITNESSES:

Ella V. Mack
A. H. Pond

Mary A. Northrup INVENTOR

BY
Smith & Denison
her. ATTORNEYS

UNITED STATES PATENT OFFICE.

MARY A. NORTHURP, OF KIPP, PENNSYLVANIA.

DEVICE FOR FASTENING BUTTONS.

SPECIFICATION forming part of Letters Patent No. 458,110, dated August 18, 1891.

Application filed June 11, 1890. Serial No. 355,043. (No model.)

To all whom it may concern:

Be it known that I, MARY A. NORTHURP, of Kipp, in the county of Bradford, in the State of Pennsylvania, have invented new and useful Improvements in Devices for Fastening Buttons, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to devices for securing and fastening buttons to garments.

My object is to produce a ready means for fastening buttons to garments, cheap, durable in construction, and of great utility.

My invention consists in the several novel features of construction and operation hereinafter described, and which are specifically set forth in the claim hereunto annexed.

It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a view of the under side of the garment having a button secured by my device. Fig. 2 is a view of the same with the protecting-sheet unfolded. Fig. 3 is a view of the protecting-sheet open. Fig. 4 is a section on line X X in Fig. 1. Fig. 5 is a view of the button and its wire, looking at it at a point at right angles to line X X in Fig. 1. Fig. 6 is a side view of the same, but showing the button in dotted lines.

A is the button, provided in this case with two eyes; but I do not confine myself to two eyes, as it will be obvious that any greater number may be used with the same effect.

B is a portion of the garment, and C is a protecting-sheet constructed substantially as shown, of rather stiff paper, cambric, or other material, which I place next to the inner face

of the garment and opposite the eyes of the button.

a are the notches cut directly opposite each other in the edges of the protecting-sheet, which permit of its being folded over uniformly.

l is a wire thread passing through the eyes of the button and through the garment and protecting-sheet and having the loop upon the upper side thereof, the ends being bent over onto this protecting-sheet, as shown. This protecting-sheet C is constructed, preferably, as shown, with sufficient width to allow it to be folded over one end upon the other and upon the end of the wire thread, thus forming the twofold purpose of keeping the said ends close down in position, thereby securing the button, and also for the purpose of protecting the other garments from wearing against the rough ends of the wire.

What I claim is—

In a device for securing buttons to garments, the combination, with a button provided with eyes, as set forth, of a fastener consisting of a piece of wire passed through said eyes and garment and through a protecting-sheet and bent down as described, said protecting-sheet being formed with notches a, having its sides folded at the notches over the bent ends of the wires and covering the same, as set forth.

In witness whereof I have hereunto set my hand this 24th day of May, 1890.

MARY A. NORTHURP.

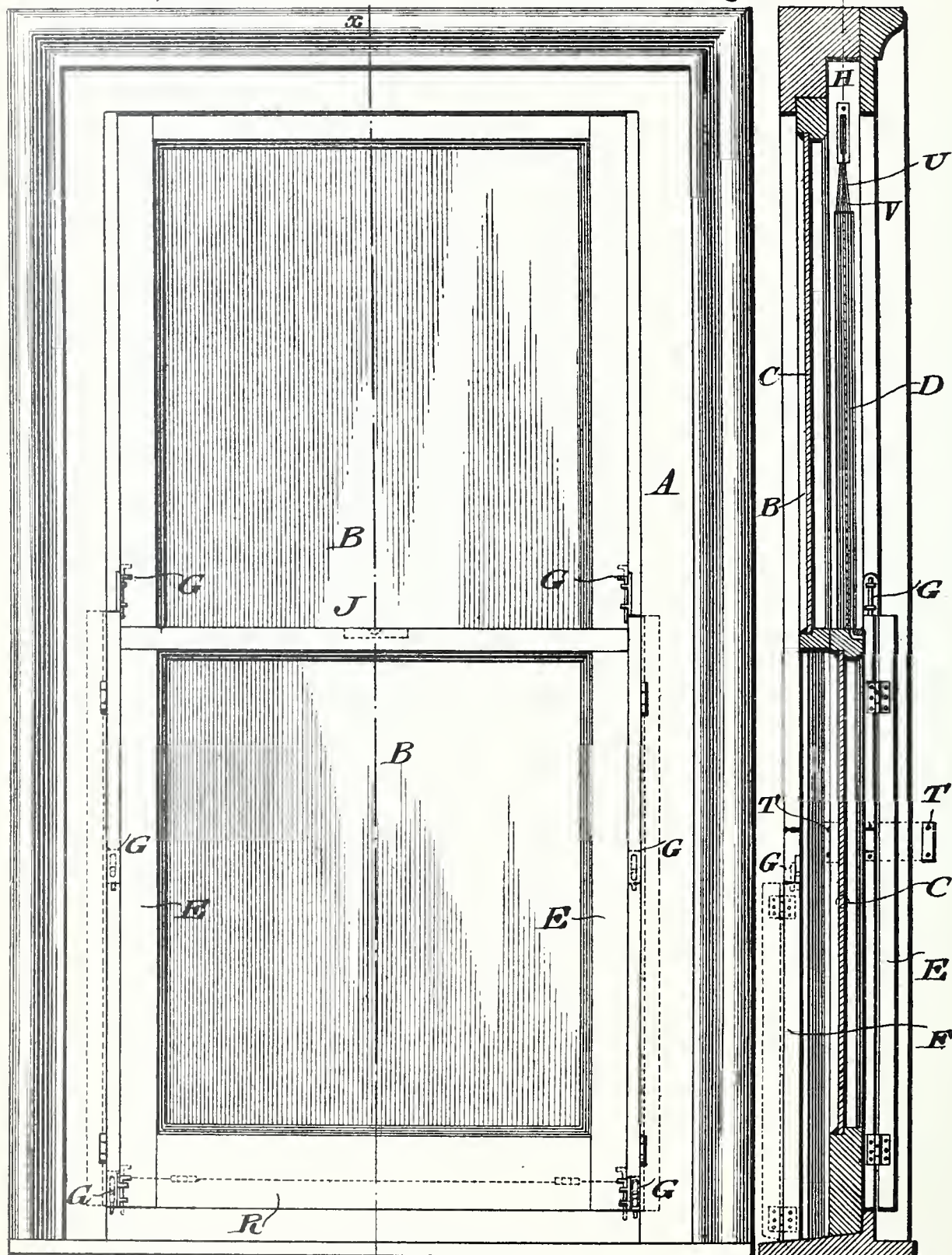
In presence of—

JOHN A. CODDING,
BENJAMIN NORTHURP.

F. V. & M. A. GREENE.
WINDOW.

No. 458,392.

Patented Aug. 25, 1891.



WITNESSES:

P. H. Hagler.
L. Douville

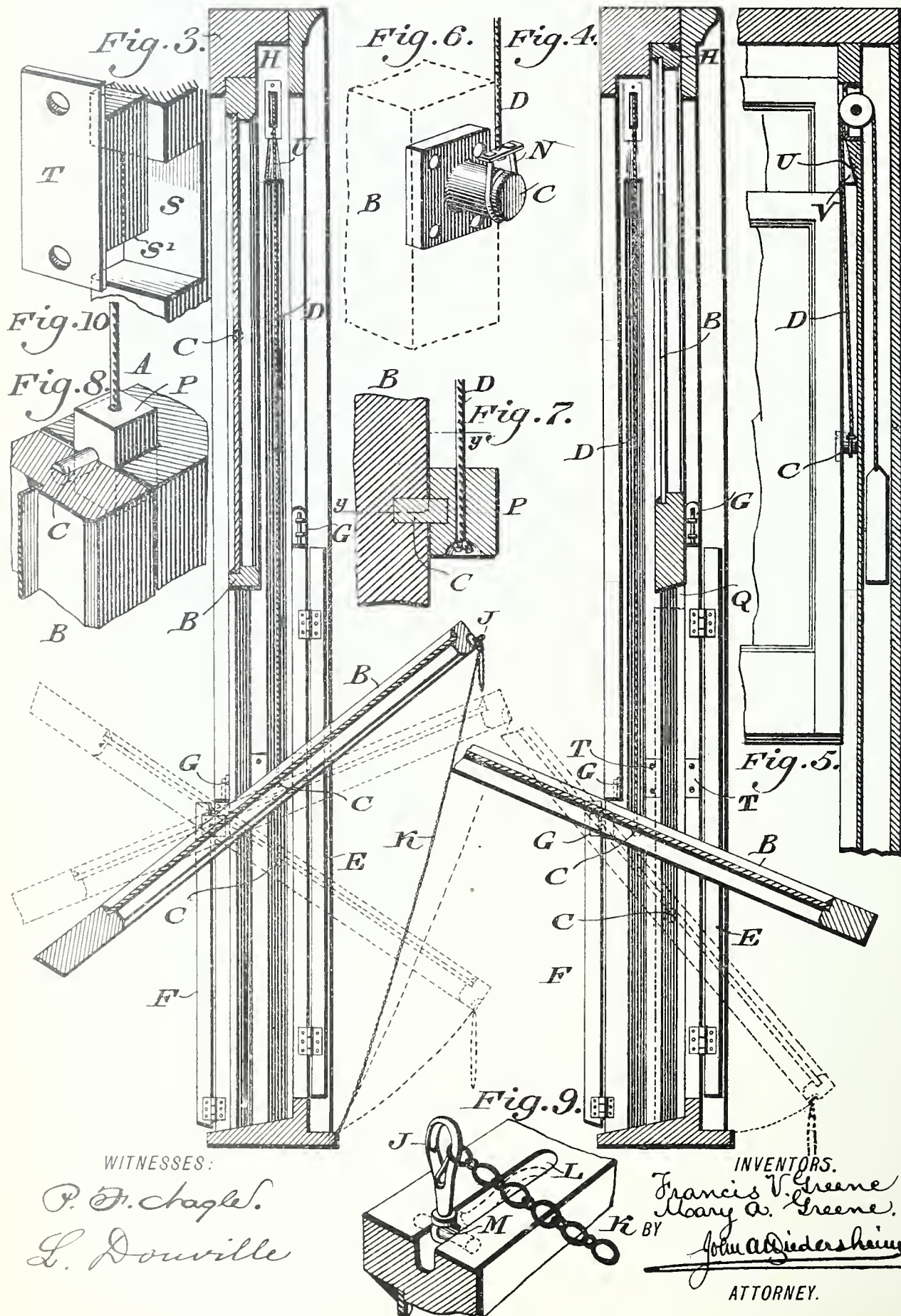
Fig. 1.

INVENTORS
Francis V. Greene
Mary A. Greene
BY
John A. Diederichsen
ATTORNEY.

F. V. & M. A. GREENE.
WINDOW.

No. 458,392.

Patented Aug. 25, 1891.



WITNESSES:

P. D. Chagel.
L. Douville

INVENTORS.

Francis V. Greene
Mary A. Greene.

ATTORNEY.

UNITED STATES PATENT OFFICE.

FRANCIS V. GREENE AND MARY A. GREENE, OF PHILADELPHIA,
PENNSYLVANIA.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 458,392, dated August 25, 1891.

Application filed January 24, 1891. Serial No. 378,942. (No model.)

To all whom it may concern:

Be it known that we, FRANCIS V. GREENE and MARY A. GREENE, citizens of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Windows, which improvement is fully set forth in the following specification and accompanying drawings.

Our invention consists of a window having its sash or sashes adapted to be rotated so that the outside of the same may be convenient of reach for purposes of cleansing, glazing, repairs, &c., the window-frame, which is made without parting beads, being provided with sectional beads, which may be opened or closed, and with means whereby the journals or gudgeons of the sashes may be readily fitted to or removed from said frame. Provision is also made to secure a temporary horizontal open space between the sashes at the meeting-rails, so that when the lower sash is raised to the head of the frame and the upper sash lowered to the sill the top of the latter can be easily grasped by the hand through the above-mentioned open space and rotated inwardly, and other novel features are presented, as will be hereinafter set forth, it being noticed that the working on the outside of a sash or sashes is obviated, and that both sashes are to be separately rotated inwardly, while their lower rails are in contact with or near the sill-piece of the frame.

Figure 1 represents a view of the inner face of a window embodying our invention. Figs. 2, 3, and 4 represent vertical sections on line *x x*, Fig. 1, certain parts being in different positions. Fig. 5 represents a vertical section of a portion at a right angle to Fig. 4. Fig. 6 represents a perspective view of one of the journals and the connected sash-cord. Fig. 7 represents a vertical section of a modification of said journal. Fig. 8 represents a perspective view thereof in section on line *y y*, Fig. 7. Fig. 9 represents a perspective view of a portion of the top of the meeting-rail of the lower sash. Fig. 10 represents a perspective view of a portion of the window-frame, showing a throat or recess for the entrance of

the journal of a sash and also a covering therefor.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a sash-frame, and B B designate window-sashes therein, said sashes having journals C projecting from the sides thereof, the same entering the grooves in the frame A and having connected with them the sash-cords D, whereby the sashes may be raised and lowered, as usual, the journals C, however, permitting the sashes to be swung or rotated into various positions, forms of which are shown in the full and dotted lines, Figs. 3 and 4. The lower portions of the inside and outside beads are separated from the upper portions thereof, forming sections E F, which are hinged to the adjacent portions of the frame, whereby the inner sections E may swing inwardly and the outer sections F may swing outwardly, so that both sections may be removed from the sashes when swinging or rotary motions are to be imparted thereto. When the sections are restored to their normal positions, they close against the sashes and form continuities of the upper fixed sections of the side beads and are locked or secured by bolts G or other fastenings suitably applied.

In the head of the window-frame is a chamber H, which is above the sash-cord pulleys and adapted to receive the upper part of the lower sash when raised for purposes to be hereinafter explained.

To the meeting-rail of the lower sash is secured a snap-hook J, whereby the links of a chain K may be engaged therewith for holding said sash at different angles, as more particularly shown in Fig. 3, the lower end of said chain being secured to the sill-piece of the sash-frame. In the meeting-rail is a recess L, which is adapted to receive the snap-hook when the latter is not required for use, said hook readily turning on the rod M, which connects it with the meeting-rail. (See Fig. 9.)

In Fig. 6 the sash-cord is connected with a yoke N, the latter freely encircling the journal C, so that the sash may turn on said shackle.

In Figs. 7 and 8 the sash-cord is connected with a block P, which plays in the groove of the sash-frame and carries the journal C, which, as is evident, enters the side of the sash and permits the sash to rotate as in Fig. 6.

The operation is as follows: When it is desired to turn the lower sash, it is raised so that the section F of the outer bead may be reached and swung out. The section E of the inner side is swung inwardly, and thus both sections are clear of the sash, it being noticed that the fastening of the section F is convenient of access. The sash may now be rotated, so as to be placed at a desired angle for purpose of ventilation, or overturned sufficiently to bring the outer face within the apartment for purposes of washing, glazing, &c., all as will be seen in Fig. 3. In order to turn the upper sash, the same is lowered and the lower sash raised to full extent, its top part entering the chamber II, as has been stated. This leaves, as shown in dotted lines in Fig. 4, a space Q between the meeting-rails of the two sashes, through which the hand may be introduced in order to grasp the top rail of the lowered sash, and thus turn said sash, so that it partly enters the apartment, it being also adapted to be overturned and placed at various angles, the same as the upper sash. The sashes may be restored to their normal positions and the sections E F closed and secured, and thus the sashes, when so required, may be raised and lowered as usual.

In Fig. 1 we show the bottom part R of the lower sash divided horizontally, the parts being hinged together, so that the part R may be raised and thus form the space Q, when the sashes are respectively raised and lowered, the same as that formed by the chamber II. This method of securing the open space Q, required for rotating the lowered upper sash inwardly, is to be used as a substitute when the chamber II cannot be formed in the head of the frame.

In the inner casings are horizontal recesses S, which are adapted to receive the journals C, so as to permit the same to reach the vertical grooves of the window-frame and to be removed therefrom. In attaching the sash-cords to the journals the ends of the former are brought down through the grooves out of the recesses and seened to the journals by holding the sashes so that the journals are near and opposite the recesses. When the sash-cords are secured, the journals are passed through the recesses S into the grooves and the said recesses then filled by removable blocks S', which are held in place by removable plates T, properly secured to the inner casings and pulley-stiles.

In order to form a solid bearing or seat for the pulley-casings, which are countersunk,

the pulley-stiles are left intact for some distance below the head of the frame, the grooves for the journals C terminating upwardly within a few inches of the lower edges of the pulley-casings. U designates the guides for the sash-cords thus formed, and V small grooves which communicate with the grooves in which the journals move, said small grooves V deepening and widening from top to bottom, by which provision as the sash-cords extend in somewhat oblique direction from the pulleys to the journals C said cords when running are prevented from coming in contact with any angles or corners of the frame just below the pulley-casings. (See more particularly in Fig. 5.)

A chain may be connected with a snap-hook on the top rail of the upper sash, so as to control the same, similar to that of the lower sash.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A window-frame having hinged inside and outside beads and sashes with journals which enter the grooves of the frame and are connected with the sash-cords, the sashes being adapted to have a temporary horizontal open space between the lower rail of the lower sash when raised to the head of the frame and the top rail of the upper sash when lowered to the sill, each sash being rotatable independently of the other, substantially as described.

2. A window-frame having sashes rotatably mounted on journals sliding in grooves therein and hinged inside and outside beads, said frame having a chamber cut in the head thereof into which the top of the lower sash can be raised, so as to leave a temporary horizontal open space between its lower rail and the top rail of the upper sash when lowered to the sill, substantially as described.

3. A window-frame having sashes rotatably mounted on journals sliding in grooves therein and movable beads with the lower rail of the lower sash divided horizontally, the two parts being hinged, so that when this sash is raised to the head of the frame and the upper sash is lowered to the sill by raising the lower hinged section there will be a temporary horizontal open space between the sashes, substantially as described.

4. A window-frame having movable beads and provided with recesses S in the inner casings, sashes with sash-cords attached to journals which enter grooves in the frame, said recesses S being for the introduction and removal of the journals, blocks S', fitted in the grooves, and the plates T for holding the said blocks in place, substantially as described.

5. A window-frame having a sash provided with a journal whereby the sash may be ro-

tated and a cord connected with said journal running in a groove, whereby the sash may be raised or lowered, which groove terminates some inches below the pulley-casing, thus forming a solid seat or bearing for the pulley-casing and at the same time affording material for a small groove deepening and widening vertically downward for the reception and protection of the cord, substantially as described.

FRANCIS V. GREENE.
MARY A. GREENE.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. JENNINGS.

(No Model.)

T. E. SIPE.
TRACING TOOL.

No. 481,721.

Patented Aug. 30, 1892.

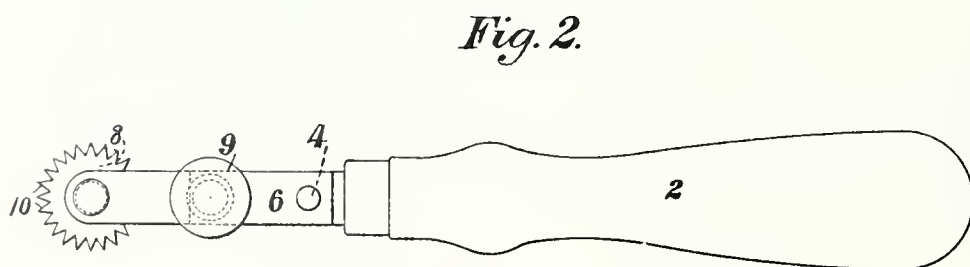
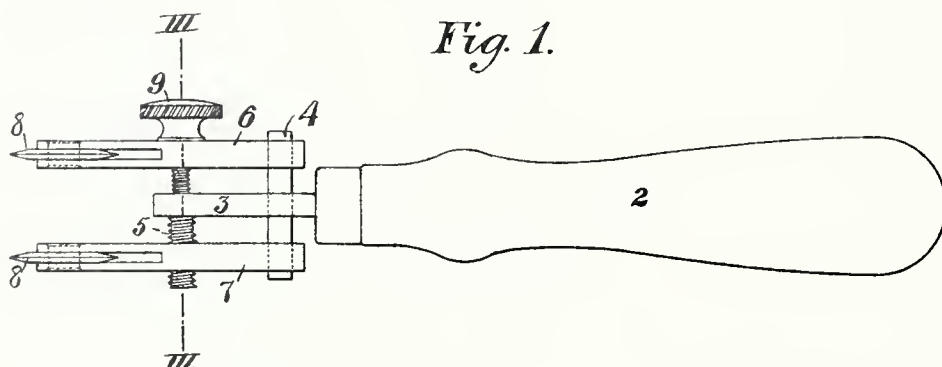
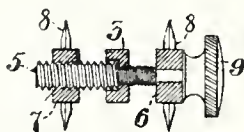


Fig. 3.



WITNESSES

Harren M. Swartz
H. M. Corum

INVENTOR

Thalia E. Sipe
by W. Bakewell Jones
her attorney

UNITED STATES PATENT OFFICE.

THALIA E. SIPE, OF ALLEGHENY, PENNSYLVANIA.

TRACING-TOOL.

SPECIFICATION forming part of Letters Patent No. 481,721, dated August 30, 1892.

Application filed April 15, 1892. Serial No. 429,309. (No model.)

To all whom it may concern:

Be it known that I, THALIA E. SIPE, of Allegheny city, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Tracing-Tools, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

10 Figure 1 is a front elevation of my improved tracing-tool. Fig. 2 is a side elevation of the same; and Fig. 3 is a cross-section on the line III III of Fig. 1, looking toward the tracing-wheels.

15 My invention relates to that class of tracing-tools used for puncturing garment-patterns wherein two parallel adjustable wheels are employed; and it consists in improved means for adjusting the distance between the
20 wheels, as hereinafter more fully described, and set forth in the claims.

In the drawings, in which similar numerals indicate corresponding parts, the handle 2 of the tool is provided with a projecting shank 3, which is flattened upon its sides and provided with two holes, through the rear one of which passes the loose pin 4 and through the other passes the screw-threaded shaft 5, which is provided with two portions of different diameters, as shown in Fig. 3, and carries the arms 6 and 7. The hole in the shank is likewise enlarged in one portion and the smaller portion is screw-threaded to correspond with the reduced part of the shaft. The pitch of the enlarged portion of the shaft is twice that upon the smaller portion, and the arm 7 is interiorly screw-threaded and carried upon the enlarged part, while the other arm is carried loosely upon a reduced smooth portion of the shaft and is held in place by the collar forming the end of the screw-thread. The shaft is actuated by the milled head 9 thereon, and it is evident that as the screw-shaft is turned in either direction the wheels will be carried
45 in opposite directions an equal distance. The tracing-wheels 8 8 are of the usual type, having the sharpened teeth 10, and are loosely

mounted upon shafts in the slotted ends of the arms 6 and 7, which at their rear ends are provided with guiding-holes through which
50 passes the pin 4.

The action of the device is obvious. The wheels being adjusted to the desired distance apart by the turning of the head 9, the wheels are placed upon the cloth or paper and rolled
55 along, producing the desired marks at the required distance apart. The advantage of the placing of the wheels at equal distances from the central shank is that an equal pressure is brought upon each, whereas in former
60 cases, one wheel being at the center and one at one side, the most of the pressure was exerted upon the center wheel and the mark of the side wheel was very faint.

The shaft may be provided with a right and
65 left hand screw-thread, if desired, and the two arms interiorly screw-threaded to receive the same, the shank merely loosely encircling the shaft and preventing its endwise motion. This modification, as well as many other variations which will suggest themselves to those
70 skilled in the art, I consider as coming within the scope of my invention.

I claim—

1. A tracing-tool having a handle, a shank
75 projecting therefrom, a screw-threaded shaft passing through the shank and bearing two arms having tracing-wheels thereon, and a pin passing through holes in the shank and arms, substantially as and for the purposes
80 described.

2. A tracing-tool having a handle, a shank projecting therefrom, a screw-threaded shaft passing through the shank and bearing two arms having tracing-wheels thereon, a head
85 upon one end of the shaft, and a pin passing through holes in the shank and arms, substantially as and for the purposes described.

In testimony whereof I have heren to set my hand this 11th day of April, A. D. 1892.
90 THALIA E. SIPE.

Witnesses.

H. M. CORWIN,
W. B. CORWIN.

(No Model.)

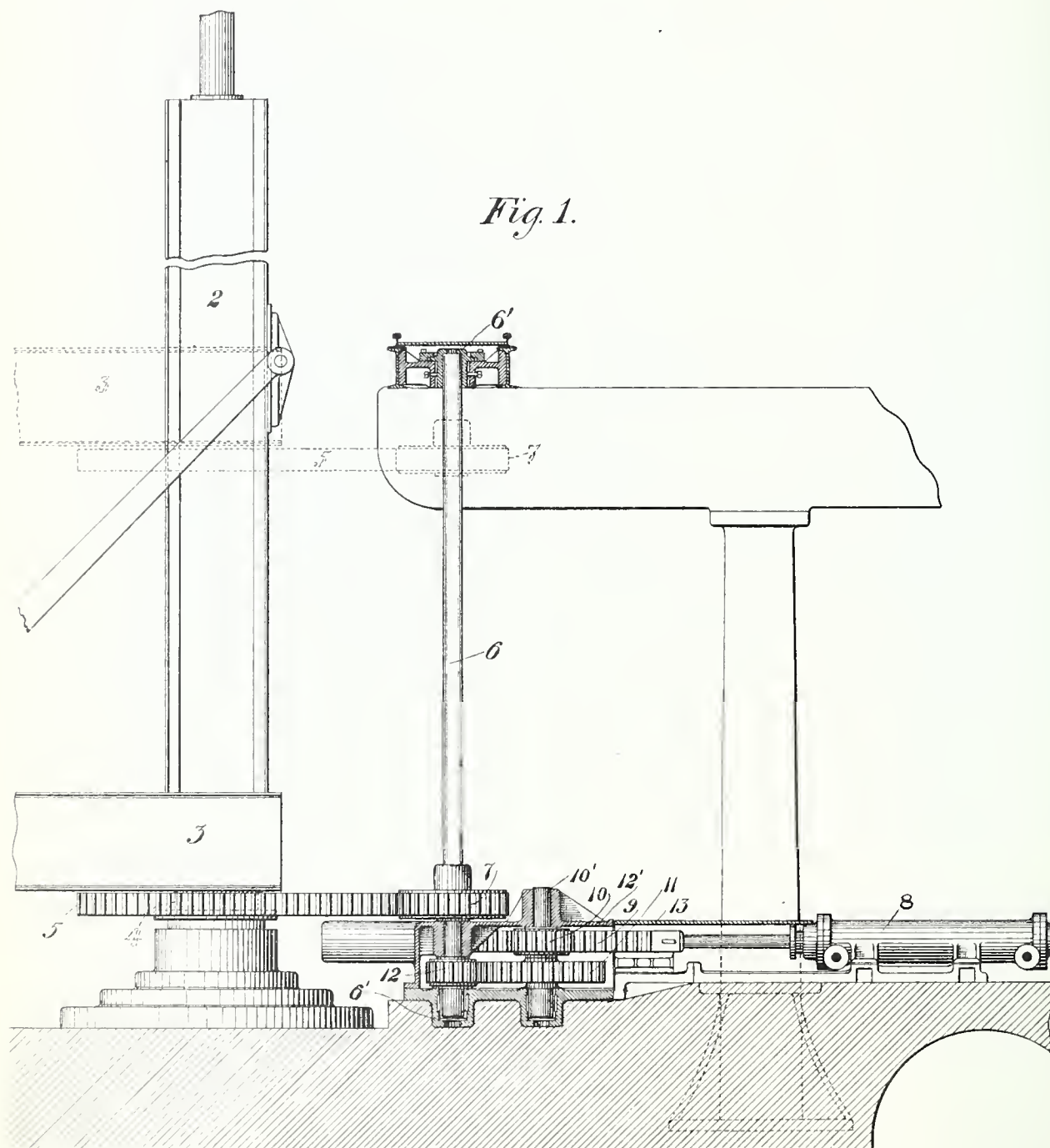
2 Sheets—Sheet 1.

C. MERCADER.
CRANE TURNING MECHANISM.

No. 487,954.

Patented Dec. 13, 1892.

Fig. 1.



WITNESSES

A. M. Conway
W. W. Swartz

INVENTOR

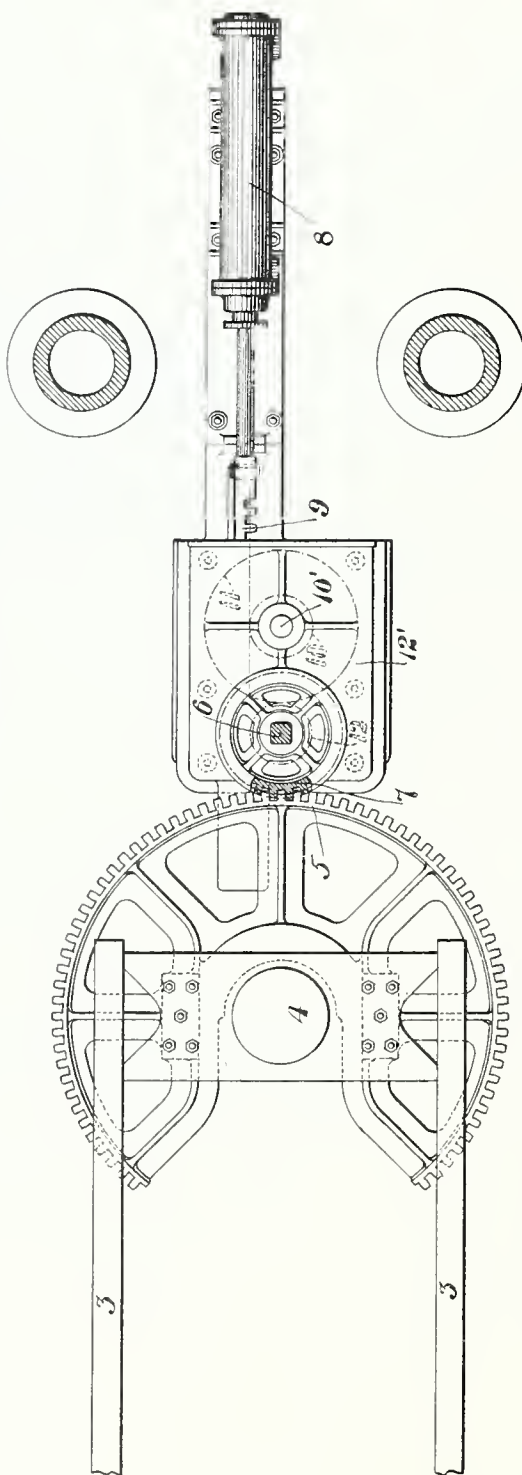
Camille Mercader
by W. Baxendell & Sons
his Attorneys.

C. MERCADER.
CRANE TURNING MECHANISM.

No. 487,954.

Patented Dec. 13, 1892.

Fig. 2.



WITNESSES

St. M. Corwin
W. W. Swartz

INVENTOR

Camille Mercader
by W. Baxendale & Son
his Attorneys.

UNITED STATES PATENT OFFICE.

CAMILLE MERCÁDER, OF BRADDOCK, PENNSYLVANIA.

CRANE-TURNING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 487,954, dated December 13, 1892.

Application filed August 30, 1892. Serial No. 444,518. (No model.)

To all whom it may concern:

Be it known that I, CAMILLE MERCÁDER, of Braddock, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Crane-Turning Mechanism, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view showing, in side elevation, partly in vertical section, the mast of a crane provided with my improved turning mechanism. Fig. 2 is a plan view partly in horizontal section.

Like symbols of reference indicate like parts in each.

The object of my invention is to provide means for turning cranes which shall be especially applicable to ladle-cranes and which shall be the cause of saving labor in their operation.

In the drawings, 2 represents the mast of a ladle-crane, and 3 is the jib, composed of horizontal beams which project from the mast and are adapted to support the burden of the crane. The mast and jib are adapted to be moved vertically by a lifting cylinder and plunger which in the construction illustrated are set in a pit in the mill-floor, the head of the plunger 4 being shown by dotted lines projecting above the same in Fig. 1. The mast is rotary on a vertical axis, the bottom journal being preferably constituted by the plunger which supports the mast and is itself rotatory in the lifting-cylinder.

The construction of the parts above described does not constitute an element of limitation of my claims.

The means for rotating the crane are as follows: 5 is a gear-wheel fixed to the crane-mast and movable vertically with it. 6 is an upright shaft set near to the mast and journaled in top and bottom bearings 6'. It has a pinion 7 set thereon with a traveling connection, which may be a feather and spline, but is preferably constituted by squaring the shaft and the interior of the pinion's hub, so that the pinion may be capable of sliding vertically on the shaft while maintaining its operative relation thereto. The pinion 7 is in gear with the gear-wheel 5, and the two wheels are con-

nected by the fitting of the periphery of one between annular flanges on the other, so that as the wheel 5 moves vertically with the crane it shall carry the pinion 7 with it and shall continue to be in gear therewith in every position of the crane-jib. This is illustrated in Fig. 2, in which part of the flange of the pinion 7 is shown as broken away. In Fig. 1, by full lines, the jib is shown in its lowest position, and by dotted lines it is shown in its highest position.

The shaft 6 is driven by a motor 8, connected with it by gearing preferably constructed as follows: The motor, which may be a cylinder and plunger, has a rack 9 meshing with a pinion 10 on whose shaft 10' is a gear-wheel 11, meshing with a gear-wheel 12 on the shaft 6, so that by projecting the plunger of the motor the shaft 6 shall be rotated and, as will appear from the drawings, such rotation is communicated to the crane-mast and will turn the same in any position of the jib. The moving parts of the motor, the gearing connecting it with the crane-mast, and the bearings of the shaft 10' are inclosed in a box 12', having a cover 13. These exclude dirt and cinder from the gearing, and thus prevent injury to the latter.

By putting the turning mechanism at the base of the crane all the disadvantages which have resulted from the supporting of the crane-turning motor by the roof structure of the building are avoided and a cheaper and better arrangement is had.

Without limiting myself with strictness to the described construction of the parts, I claim as new—

1. Turning mechanism for cranes, comprising an upright shaft, a traveling power connection between the crane and shaft, and means for turning the shaft, substantially as and for the purposes described.

2. Turning mechanism for cranes, comprising an upright shaft, a traveling power connection between the crane and shaft, and a motor situate on the mill-floor and connected with the shaft, substantially as and for the purposes described.

3. Turning mechanism for cranes, comprising an upright shaft, a traveling pinion on the shaft, and gearing on the crane meshing

therewith, and means for turning the shaft,
substantially as and for the purposes de-
scribed.

4. A crane having a lifting-mast and jib, a
5 turning motor set at the base of the mast, and
a traveling power connection between the
motor and mast, substantially as described.

In testimony whereof I have hereunto set
my hand this 18th day of August, A. D. 1892.

CAMILLE MERCÁDER.

Witnesses:

THOMAS W. BAKEWELL,
W. B. CORWIN.

(No Model.)

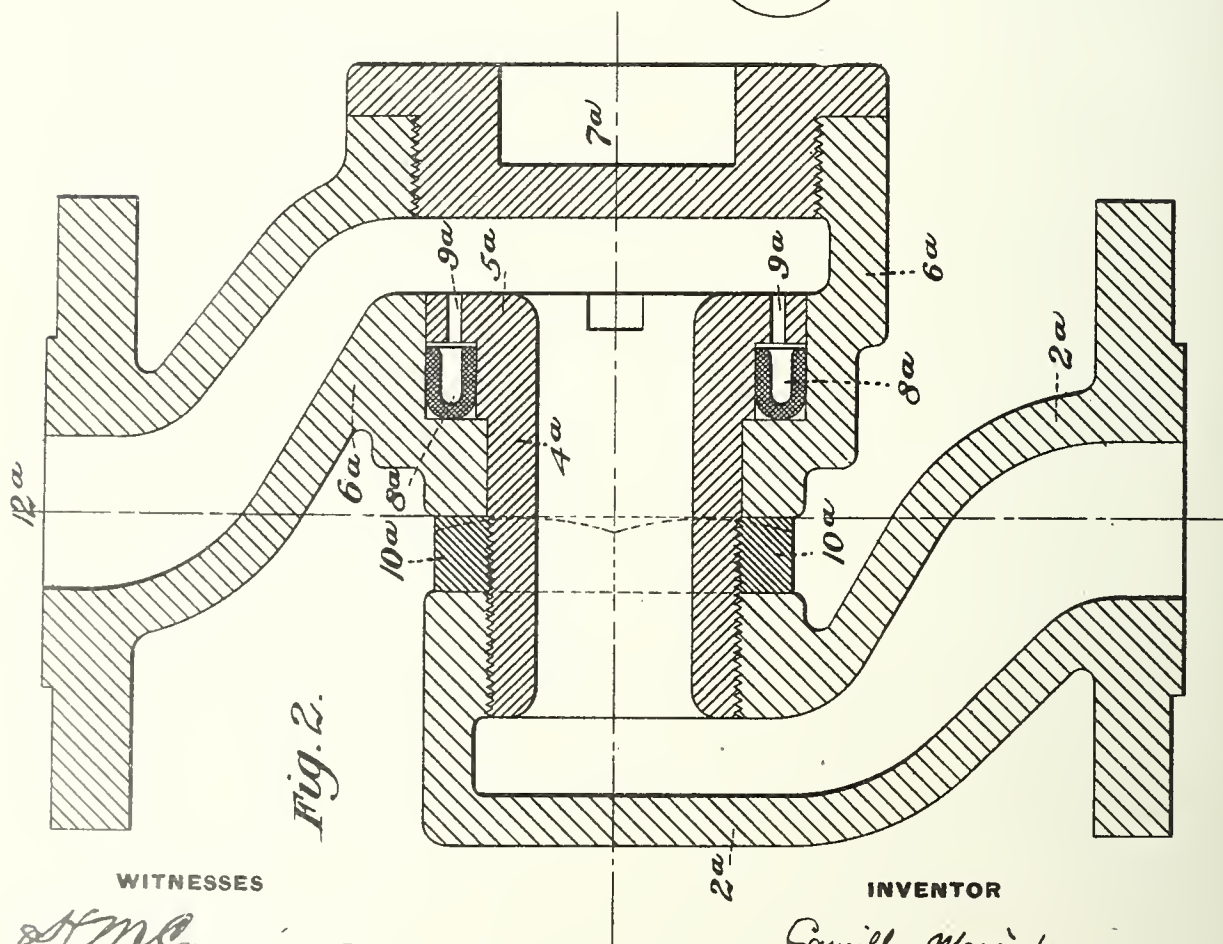
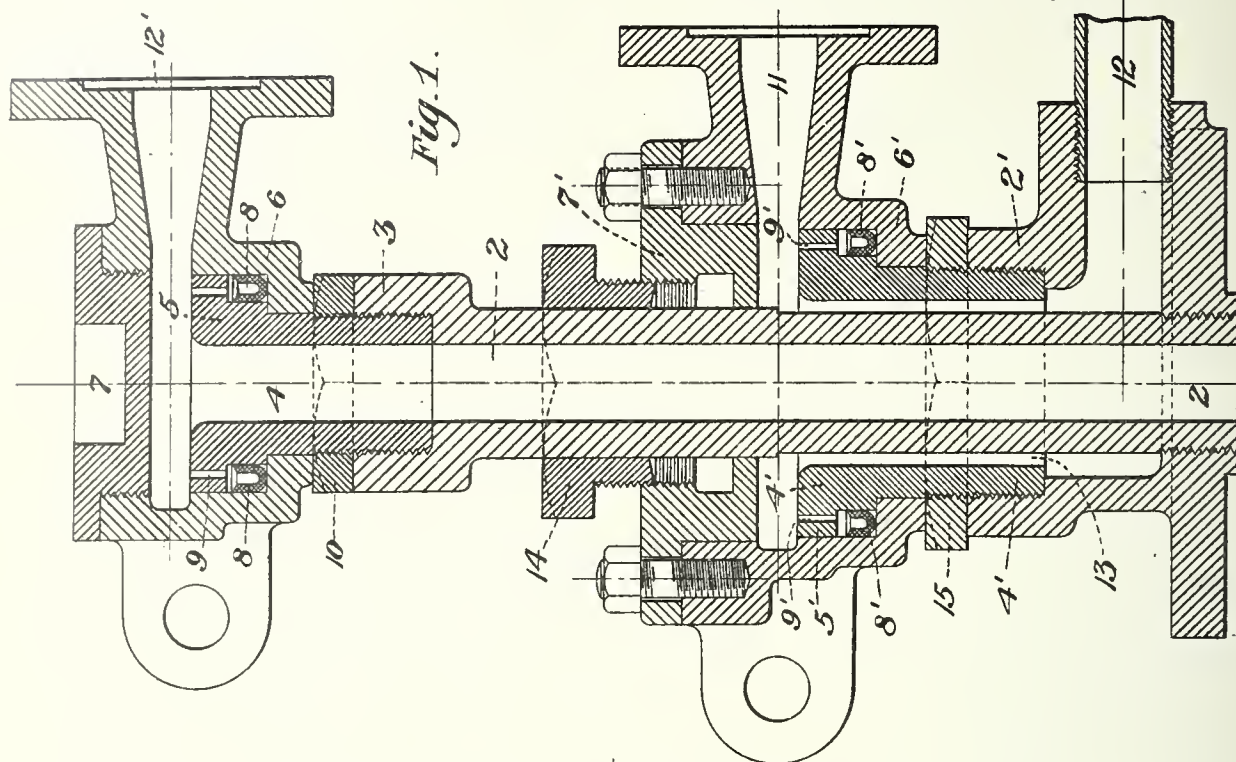
2 Sheets—Sheet 1.

C. MERCADER.

PIPE CONNECTION FOR HYDRAULIC MECHANISMS.

No. 486,383.

Patented Nov. 15, 1892.



WITNESSES

H. M. Corwin
W. B. Corwin

INVENTOR

Camille Mersader
by W. B. Kentell & Sons
his Attorneys

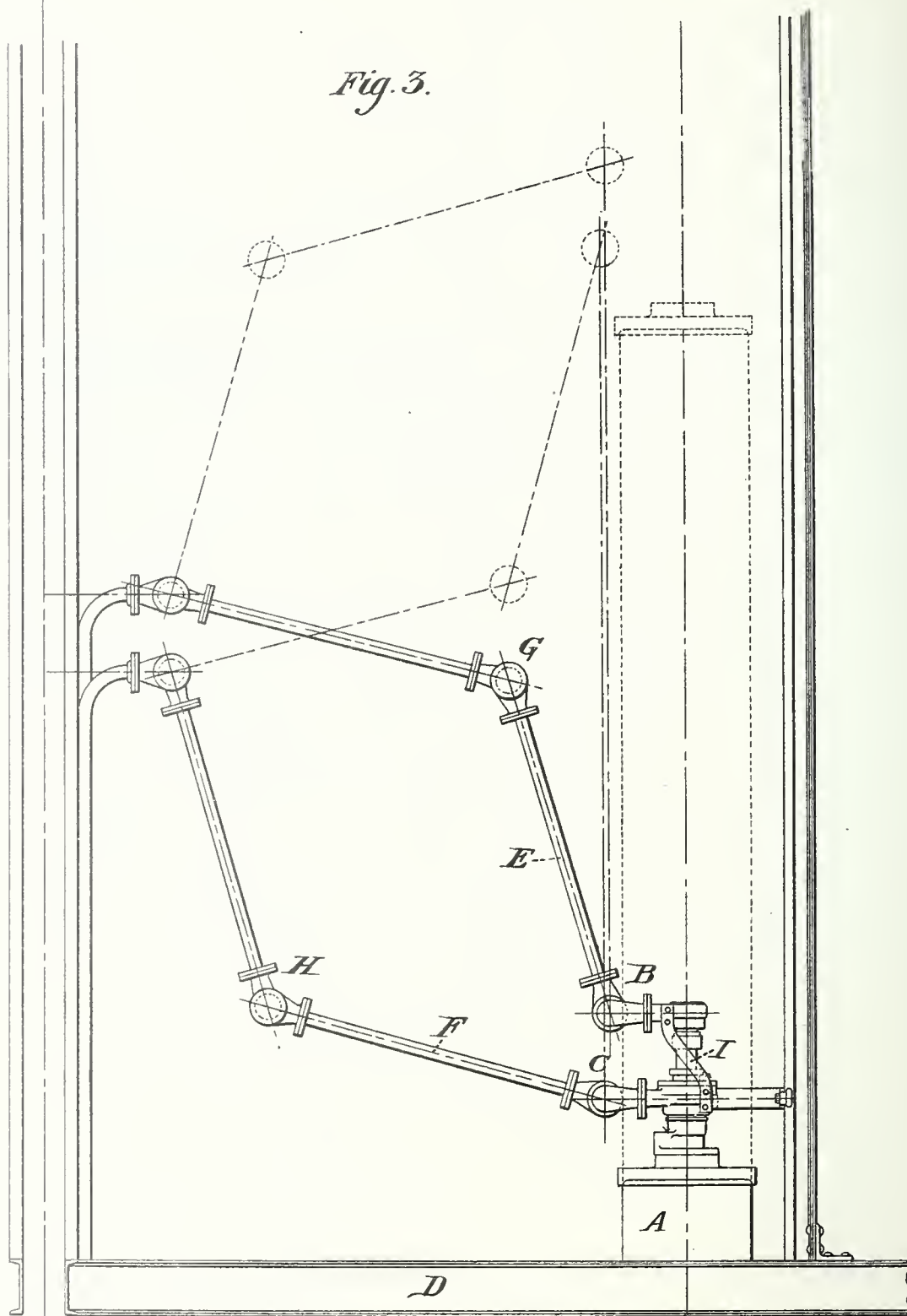
C. MERCÀDER.

PIPE CONNECTION FOR HYDRAULIC MECHANISMS.

No. 486,383.

Patented Nov. 15, 1892.

Fig. 3.



WITNESSES

H. M. Corwin
H. B. Corwin

INVENTOR

Camille Mercàder
by W. B. Riddell & Sons
his Attorneys

UNITED STATES PATENT OFFICE.

CAMILLE MERCÂDER, OF BRADDOCK, PENNSYLVANIA.

PIPE CONNECTION FOR HYDRAULIC MECHANISMS.

SPECIFICATION forming part of Letters Patent No. 486,383, dated November 15, 1892.

Application filed February 19, 1892. Serial No. 422,106. (No model.)

To all whom it may concern:

Be it known that I, CAMILLE MERCÂDER, of Braddock, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Pipe Connections for Hydraulic Mechanism, of which the following is a full, clear, and exact description.

The object of my invention is to provide a swivel connection for pipes for conveying steam, water, or other fluid, which shall be simple in construction, which shall not be subject to leak, and which shall not require frequent repair, as do the swivel-joints now commonly known and used.

The preferred construction of my improvement is described in this specification. The items of invention for which I desire protection are summarized in the claims.

My invention is capable of general use in connection with cranes or other hydraulic or steam-operated mechanism.

In Figure 1 I illustrate my invention as applied to the top water connection of a crane, the parts being shown in vertical axial section. Fig. 2 is a sectional view of a swivel-joint adapted for use on a swinging water-pipe. Fig. 3 is a side elevation showing the top portion of a crane having my improved water connections.

In Fig. 1 I show in the same structure two swivel-joints embodying my invention. 2 represents a pipe set in the axis of the crane-journal, terminating at the upper end in a nipple 3. 4 is a swivel-neck, which is screwed into the nipple 3 and is provided at its end with an annular flange or enlargement 5. 6 is a box or pipe which fits around the swivel-neck and is itself fixed, being coupled at 12' to the water-supply pipe of the crane. Its outer end may be closed by a screw cap or plug 7, and a nut 10 is preferably interposed between its end and the end of the nipple 3. The flange 5 is formed with a peripheral recess in which is placed a cup packing-ring 8, having an end bearing on a shoulder on the interior of the swivel-box against which the flange fits, and in order to expand this packing there are water-inlets 9, which extend into the recess from the water-passage of the joint, so that as the water passes into the cup-packing it will expand it and will cause it to seal the joint. When the parts are thus con-

structed, the pipe 2 is free to rotate, the swivel-neck 4 then turning within the box, the joint being made tight by the packing-ring and the base of the flange on the swivel-neck being pressed against the shoulder in the box with a pressure depending on the width of that part of the flange between the packing and the interior wall of the box. The parts of the lower swivel-joint shown in this figure are designated by the same reference-figures as the corresponding parts of the upper joint, being distinguished by the prime-mark, ('). By means of this second joint I form a water-passage extending axially of the crane-journal and leading from a fixed pipe connection 11 to a pipe connection 12, which rotates with the crane. 2' is a hollow box or casting corresponding in function with the pipe 2 and having a lateral passage communicating with the pipe 12. 4' is the swivel-neck, which is screwed in a nipple on the part 2' and has an annular flange 5', which is seated on an internal shoulder in an inclosing swivel-box 6' and has a peripheral recess containing an annular cup-packing 8'. The flange is formed with water-passages 9', leading to the interior of the cup-packing. The swivel-box 6' is provided with a removable closing-cap 7', which is of sufficient diameter to permit insertion of the swivel-neck 4'. The pipe 2 passes axially through the cap, through the swivel-neck, and may be fixed to the part 2', so as to be rotatory therewith, there being a water-passage 13 in the swivel-neck 4' surrounding the pipe 2 and communicating with the pipe 12, as shown. A stuffing-box and gland 14 close the joint between the pipe 2 and cap 7'. 10 is an annular nut interposed between the ends of the parts 2' and 6'. When thus constructed, the part 2' is free to rotate with the pipe 2, the swivel-neck 4' turning freely within the box 6', the packing 8' being expanded by the water-pressure and closing the joint, and the flange 5' being held by the water-pressure against the shoulder in the swivel-box.

In this specification I intend, in addition to the broad claims relating to the general construction of the swivel-joint, to claim the specific arrangement of the parts shown in Fig. 1, by which a double water-passage in the axis of the crane-journal is afforded.

Referring now to Fig. 2, it shows a swivel-joint adapted to be applied to the walking supply-pipe of an hydraulic crane and constructed on the same principle as the swivel-joints of Fig. 1. 6^a represents the swivel-box or pipe connection, having a water-passage adapted to be connected at 12^a to one of the water-pipes of the crane or other machine. 4^a is the swivel-neck, which fits within the box 6^a, so as to be rotatory axially, and is provided with an annular flange 5^a, which has a seat against an inner shoulder on the box 6^a, and is provided with an annular recess, a cup-packing 8^a, fitting on said shoulder. 9^a are passages leading through the flange 5^a, and adapted to supply water to the cup-packing. 7^a is a removable plug or cap at the end of the swivel-box, the opening closed thereby being of sufficient diameter to permit insertion of the swivel-neck 4^a. 2^a is a second swivel-box or pipe connection, adapted to be connected at the end to the second branch of the main water-pipe. The swivel-neck 4^a is screwed into and fixed in the box 2^a, so that their water-passages shall communicate as shown. 10^a is a nut interposed between the ends of the parts 2^a and 6^a and screwed upon the swivel-neck 4^a, being adapted thereby to lock and prevent the part 4^a from turning within the part 2^a. When the device is thus constructed and arranged, the parts 2^a and 4^a, being attached together, are adapted to turn freely on the axis of the swivel-neck 4^a, the joint between the parts 2^a and 4^a being sealed by the expansion of the packing 8^a, and the flange 5^a being held by water-pressure against the part 6^a.

In Fig. 3, A is the top portion of a vertically-movable and rotatory crane-mast; B C, the two swivel-joints shown in Fig. 1; D, the beams of a building in which the crane is situate. E F are walking-pipes provided with swivel connections G H and connected to the swivel-joints B and C. When the crane is moved vertically, a considerable strain is put upon the joints of the pipes, which tends to tilt the swivel connections B C and which if

uncorrected would impair their action. To overcome this, I use a rigid strap I, which connects the swivel-box of the joint B at one side of its center with the swivel-joint of the other box at the opposite side of its center. The two boxes thus counterbalance each other and the tipping tendency of each is restrained by the other.

The advantages of my invention will be appreciated by those skilled in the art. Within the scope of the invention, the device may be modified in many ways in respect of the form and relative arrangement of the parts and such modifications are intended to be covered in the following claims:

I claim—

1. In a swivel-joint, the combination of an interfitted swivel-box and swivel-neck, one having a flange and the other a shoulder against which the flange fits, a packing-ring set in a recess between the swivel-box and swivel-neck, a removable end cap, a pipe connection to which the swivel-neck is screwed, and an interposed locking-nut, substantially as and for the purposes described.

2. In a water-supply for crane-journals, the combination of a central pipe and, surrounding the same, a swivel-box and swivel-neck having flanges or shoulders adapted to be forced against each other by water-pressure, a packing-ring between said swivel-box and swivel-neck, a removal cap, and a stuffing-box, substantially as and for the purposes described.

3. The combination of two adjacent jointed pipes, swivels to which they are connected, and a counterbalancing connection between opposite sides of said swivels, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 13th day of February, A. D. 1892.

CAMILLE MERCÂDER.

Witnesses:

THOMAS W. BAKEWELL,
W. B. CORWIN.

(No Model.)

C. MERCADER.
LADLE NOZZLE.

No. 481,041.

Patented Aug. 16, 1892.

Fig. 1.

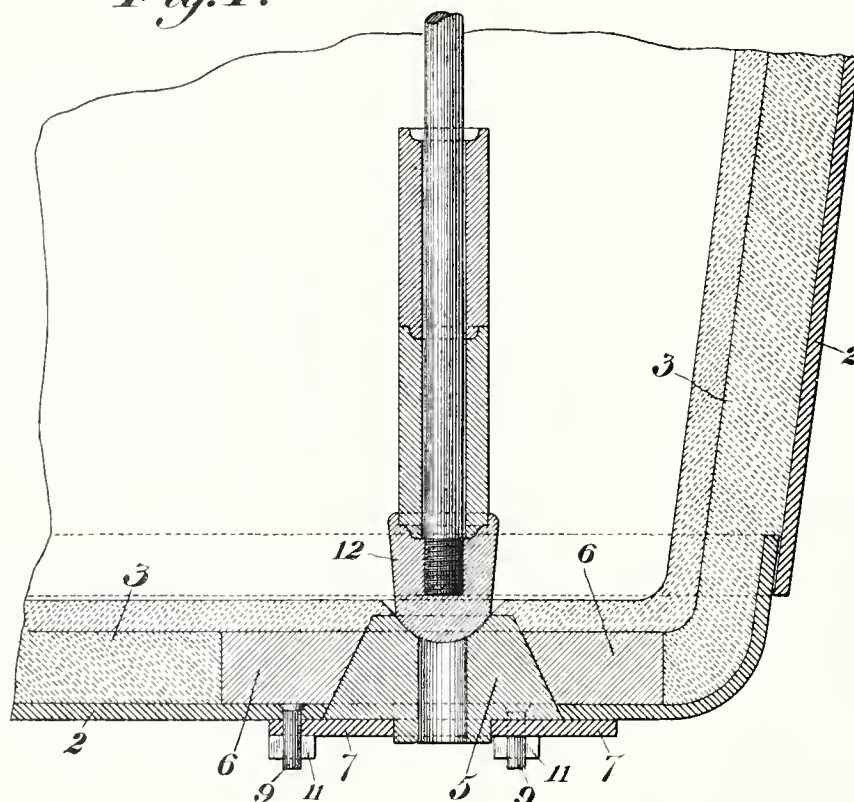
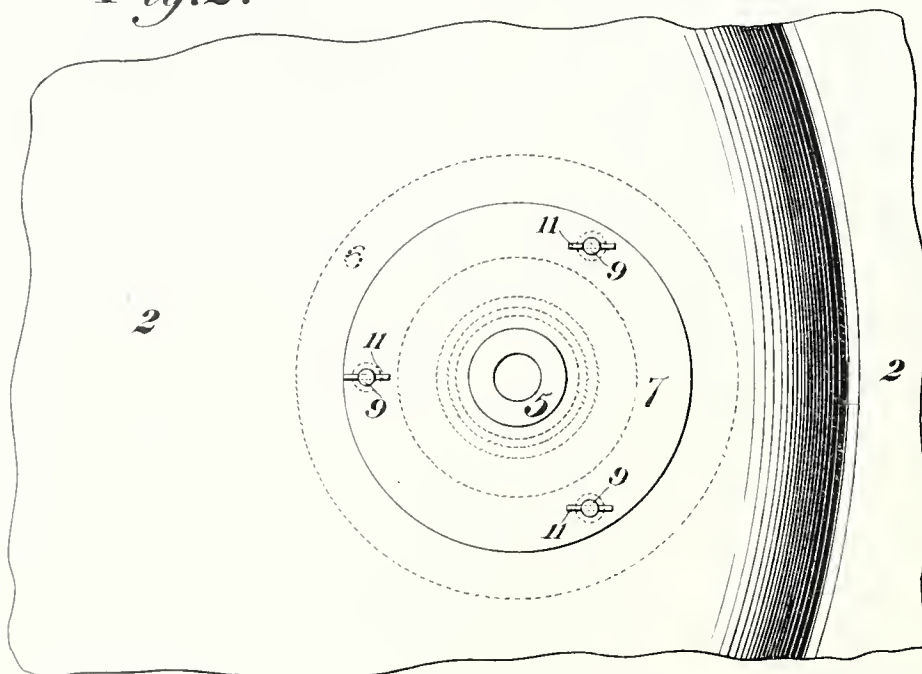


Fig. 2.



WITNESSES

A. L. Gill
H. M. Corwin

INVENTOR

Camille Mercader
by W. Baxendell & Sons
his Attorneys

UNITED STATES PATENT OFFICE.

CAMILLE MERCÀDER, OF BRADDOCK, PENNSYLVANIA.

LADLE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 481,041, dated August 16, 1892.

Application filed February 10, 1892. Serial No. 420,950. (No model.)

To all whom it may concern:

Be it known that I, CAMILLE MERCÀDER, of Braddock, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Ladle-Nozzles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical sectional view through the nozzle and ladle with the stopper in place, and Fig. 2 is a bottom plan view of the nozzle portion of the ladle with the stopper removed.

My invention relates to that class of ladles for pouring steel, which are known in the art as "bottom-pour" ladles; and it consists in a downwardly-removable tapering nozzle, which is held in place by any suitable means during the pouring operation and replaced by a new nozzle after each pour, as well as in the particular construction and arrangement of the parts, as hereinafter more fully described, and set forth in the claims.

In the drawings, 2 indicates the outer iron shell of the ladle, this shell being lined with suitable refractory material 3, as ordinarily, and provided in its bottom with a hole of sufficient area to admit the nozzle 5. This nozzle is tapered upwardly, as shown, being in the form of the frustum of a cone and fits in a correspondingly-tapered hole in an annular brick or refractory ring 6, which incloses the orifice in the casing. The refractory lining 3 is cut away to admit this ring 6, which rests upon the interior of the casing and upon its inner surface is flush with the brick lining 3.

To hold the nozzle in place while pouring, I employ a plate 7, provided with perforations through which pass the pins 9, projecting from and secured to the casing, and with a central hole to receive the central part of the nozzle-brick. The pins 9 are suitably slotted to receive the keys 11, which are driven there-through and serve to force the nozzle snugly against its tapered seat in the annular brick 6. 12 represents a stopper, which rests in a downwardly-tapered depression in the nozzle and is raised and lowered in the ordinary manner. In operating with my improved nozzle the steel is poured as ordinarily, the keys are then driven out of the pins, and the support-

ing-plate 7 and nozzle removed. A new nozzle is then luted with clay and slipped into place in the ring 6 and the parts replaced, and as the thickness of the clay is so little that it is dried very rapidly by the heat of the ladle the ladle is immediately ready for a second cast.

The advantages of my invention are obvious. The lining of the ladle will considerably outwear the nozzle; but at each cast the nozzle becomes scored and grooved by the hot steel passing therethrough, and in ordinary practice at the following casts the nozzle leaks and wastes the steel while the ladle is being moved from one mold to the next. With my invention, the nozzle being rendered easily removable from the outside after each cast, the exit-hole for the steel is kept perfectly round and smooth by successive substitution of new nozzles, and leaking and scattering of the metal are prevented. It is evident that the brick 6 may be square, hexagonal, or of any form desired, and the nozzle itself might be of pyramidal shape.

I am aware that it has been proposed to construct a ladle-nozzle so that it shall be removable upwardly from its seat in the bottom. This, however, cannot be done successfully while the ladle is in use or during the short intervals between casting, because of the heat in the interior of the ladle and because of the fact that the solidification of the slag above the nozzle cements it, so that it is practically impossible of access from above without tearing out the ladle-lining. Furthermore, where the nozzle is inserted and removable from above, it frequently happens in use that the stopper sticks to the nozzle, and when the stopper is lifted to loosen it pulls the nozzle with it and spills the charge of the ladle. This cannot happen with my improvement in which the nozzle is tapered, so that it is removable outwardly and so that lifting of the stopper cannot unseat the nozzle, even if these parts should adhere with considerable tenacity.

The means for holding the nozzle in place may be entirely altered, and many other variations will suggest themselves to those skilled in the art without departure from my invention.

I claim as my invention—

1. A ladle provided with a hole for the in-

section of a nozzle, a nozzle arranged to be removed outwardly through said hole, and means for holding said nozzle in place, in combination with an interior vertically-movable stopper, substantially as and for the purposes described.

2. A ladle provided with an inwardly-tapering nozzle set in a hole, from which it is removable outwardly, and means for removably holding said nozzle in place, in combination with an interior vertically-movable stopper, substantially as and for the purposes described.

3. A ladle provided with an annular ring and having interior inwardly-tapering sides, a nozzle having corresponding inwardly-tapering sides set in said ring, from which it is re-

movable outwardly, and means for holding the nozzle in said ring, in combination with an interior vertically-movable stopper, substantially as and for the purposes described.

4. A ladle having a nozzle with inwardly-tapering sides and an external apertured plate bearing upon said nozzle and removably held in place, in combination with an interior vertically-movable stopper, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 30th day of January, A. D. 1892.

CAMILLE MERCÀDER.

Witnesses:

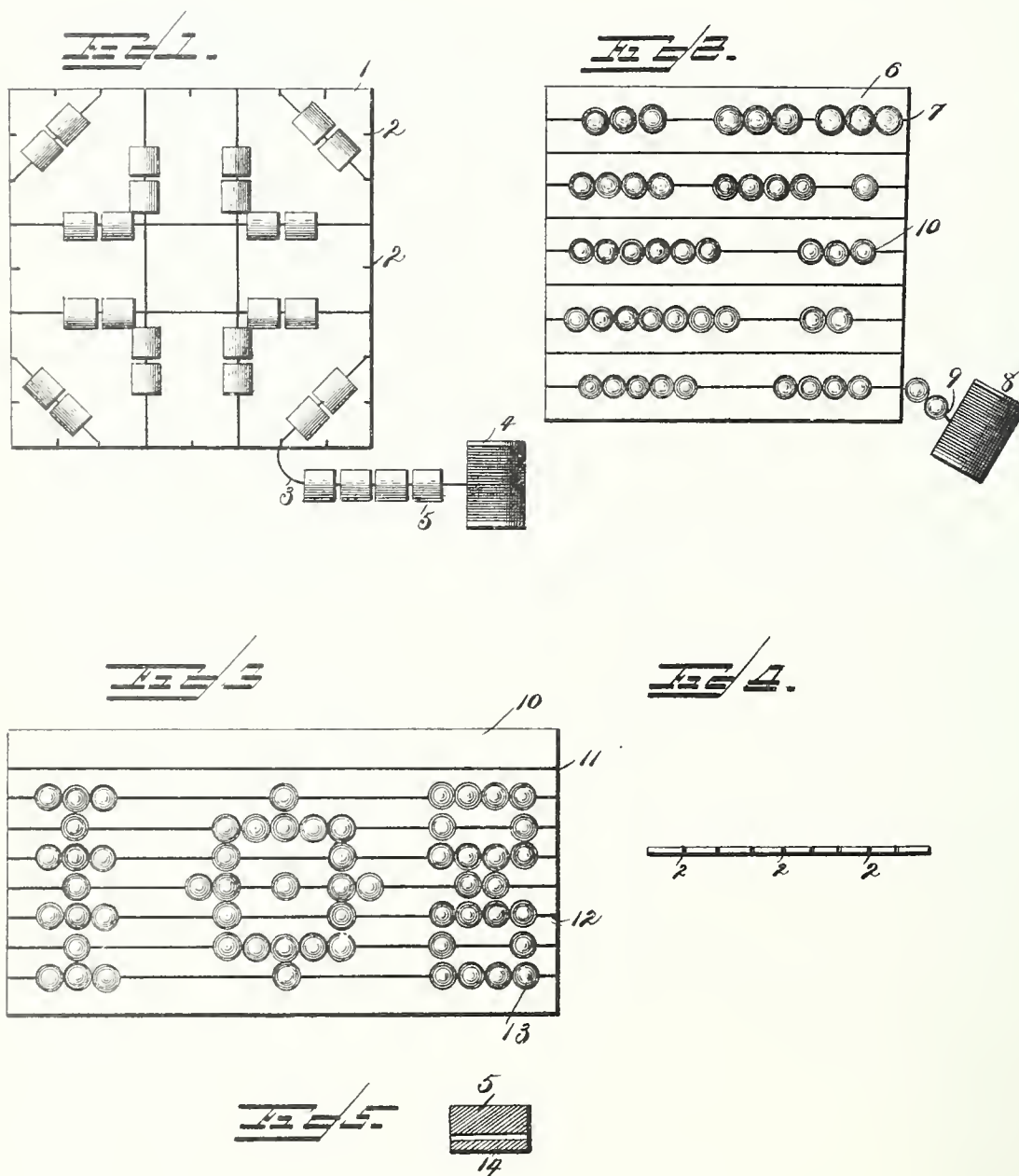
THOMAS W. BAKEWELL,
W. B. CORWIN.

(No Model.)

J. L. COLLINS.
EDUCATIONAL APPLIANCE.

No. 487,695.

Patented Dec. 6, 1892.



Witnesses

W. Schneider
John H. Siggers,

By his Attorneys,

C. A. Snow & Co.

Inventor
J. L. Collins.

UNITED STATES PATENT OFFICE.

JUDITH L. COLLINS, OF MONONGAHELA CITY, PENNSYLVANIA.

EDUCATIONAL APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 487,695, dated December 6, 1892.

Application filed August 24, 1892. Serial No. 444,026. (No model.)

To all whom it may concern:

Be it known that I, JUDITH L. COLLINS, a citizen of the United States, residing at Monongahela City, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Educational Appliances, of which the following is a specification.

This invention relates to educational appliances, and particularly to that class thereof adapted for use in primary or kindergarten schools, and in which are employed a series of buttons conveniently strung and adapted for teaching the lower branches of arithmetic, such as counting, subtracting, and adding, and, furthermore, to be used in giving object-lessons, in forming designs, &c.

The objects of the invention are to provide an apparatus for accomplishing the above by the use of beads or buttons, to avoid the annoyance to the teachers and the distraction of the attention of the pupils by the constant dropping of buttons and rolling of the same upon the floor, to adapt the apparatus for teaching symmetrical and other designs, and to aid beginners in "number-work," and to so combine the strings, board, and buttons as to adapt them to form different parts of the design.

Referring to the drawings, Figures 1, 2, and 3 are elevations of apparatuses embodying my invention, the same being shown in different forms. Fig. 4 is an edge view of one of the boards. Fig. 5 is a transverse section of one of the buttons.

Like numerals of reference indicate like parts in all the figures of the drawings.

In Fig. 1, 1 designates a board, which may be formed of any suitable material, such as wood, card-board, metal, &c., and the same is in this instance exactly square. The four edges of the board are each provided with a series of notches or kerfs 2, the same being arranged in odd numbers, in this instance seven to the edge, so that the central notch or kerf will be directly opposite the centers of the edges. The board may be of any color desired, or black and white, and it is preferred that the string 3 will be of some color at variance with the board—as, for instance, if the board is white, the string is preferably black, and vice versa. The string is conveniently

wound upon a spool 4, and upon the leading end of the string there is located a series of buttons 5, in this instance rectangular or cubical. The buttons may be of the same color as the string, but are preferably of some different color.

In Fig. 2 the same square board 6 is employed, and two of its opposite edges are provided with kerfs 7, located opposite each other. 8 designates the spool, and 9 the string, while 10 represents the buttons, which in this instance are circular. As in the previous instance, the string, buttons, and board may be of different colors, if desired.

In Fig. 3 the board 11 is made oblong, and its two narrowest edges are provided with opposite kerfs 12. In this instance 13 designates the string and 14 the buttons.

A detail view of the buttons is shown in Fig. 5 and designated as 5. Each button is provided near its rear face with a bore 15, whereby it may be strung upon the string.

In Fig. 1 I have shown a board best adapted for the use intended, in that by forming kerfs upon all of the edges greater varieties of designs may be secured, the string being in some instances passed diagonally at different angles, whereas in Figs. 2 and 3 the strings are all parallel and cross the face of the board.

Ordinarily the same number of buttons are placed on each of the cord-lines—that is, upon those portions of the cord or string that lie between two connected kerfs. The strings and buttons may remain permanently upon the board or can be removed at pleasure, to be replaced by other shapes and colors of buttons and strings. The inner faces of the buttons are preferably flat, in order that they may lie flatly against the surface of the board, and the bores through the buttons are such as will permit them to be readily slid upon the cord or string. Before beginning the work the buttons of each string are divided, one part of them being pushed to one side of the board and the other part being pushed to the opposite side, leaving an open intermediate space. In this space the main design is formed by means of the buttons, which are slid along the cord from the opposite sides toward the center. After the completion of the central design those buttons that may be

left on either side of the design may be worked into smaller designs, as shown best in Fig. 3 of the drawings. The number of buttons to be used depends upon the size of the board, the number of kerfs, and the design to be made. When the board is to be used for "number-work" only, every alternate row of buttons is moved to the right of the board and the others to the left, as in Fig. 2. The buttons may then be arranged to form as many combinations and numbers at one time as there are rows of buttons. When the buttons are round, they may be placed close together in groups and the groups a little distance apart; but when they are circular or polygonal they may be grouped about one-twelfth of an inch from each other.

The following operation takes place in applying the string or cord and buttons to the board. The cord is wound upon a small spool, as shown, the buttons being strung upon the leading end thereof. A portion of the cord containing a number of buttons is drawn across the board at a place where the design is to begin. This leading end of the cord is tied to the board and beyond the same is stretched across to the opposite kerf or any kerf desired, leaving a certain number of buttons between the two kerfs. The cord is then carried on to

the next kerf, a suitable number of buttons run down upon the same, and is then carried over and introduced into a third kerf, and so on, the cord being laced back and forth in the various kerfs. When the work is completed, the spool, together with the remaining buttons, if there be any, may be conveniently tucked into a portion of the cord that lies in rear of the board.

Having described my invention, what I claim is—

1. The herein-described educational appliance, comprising a board provided with notches in its edges, in combination with a cord having buttons loosely strung thereon and adapted to engage said notches, substantially as specified.

2. The herein-described educational appliance, the same consisting of a rectangular board, the four edges of which are provided with odd numbers of notches or kerfs, combined with a cord for removably engaging the notches and a series of buttons loosely strung upon the cord, substantially as specified.

JUDITH L. COLLINS.

Witnesses:

JOHN A. FORD,
R. F. COOPER.

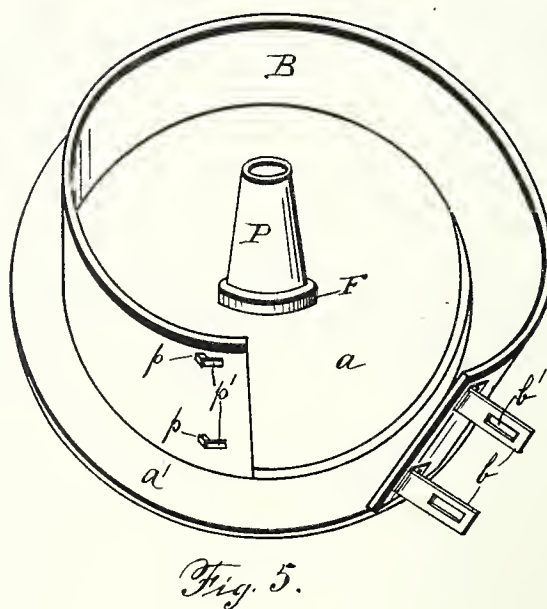
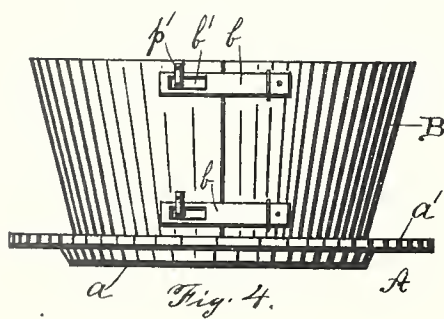
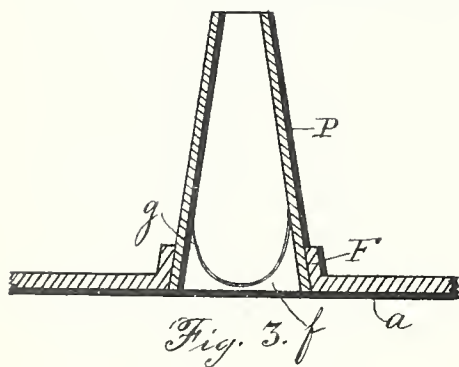
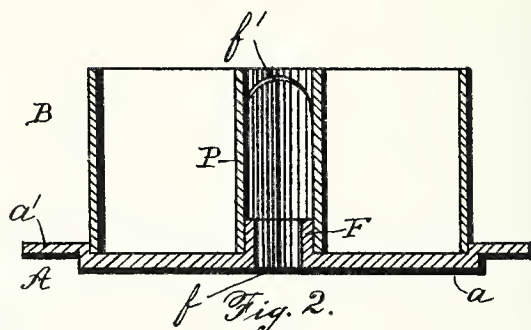
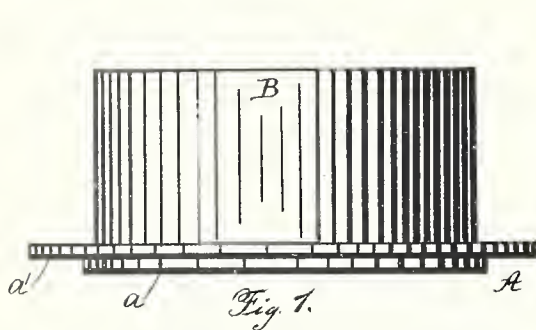


(No Model.)

T. H. & A. M. RESSLER.
CAKE DISH.

No. 470,827.

Patented Mar. 15, 1892.



Witnesses:
Martin Rettig
Ella L. Gerhart

Inventors
Theodore H. Ressler
Annie M. Ressler
per H. M. R. Gerhart
Att.

UNITED STATES PATENT OFFICE.

THADDEUS H. RESSLER AND ANNIE M. RESSLER, OF RONKS, PENNSYLVANIA.

CAKE-DISH.

SPECIFICATION forming part of Letters Patent No. 470,827, dated March 15, 1892.

Application filed July 16, 1891. Serial No. 399,769. (No model.)

To all whom it may concern:

Be it known that we, THADDEUS H. RESSLER and ANNIE M. RESSLER, citizens of the United States, residing at Ronks, in the county of Lancaster and State of Pennsylvania, have invented certain Improvements in Cake-Dishes, of which the following is a specification.

This invention relates to improvements in that class of culinary vessels used for baking cakes of considerable depth that are cut into vertical slices when served, such as pound-cake, lady-cake, fruit-cake, and the like. The baking-dishes now used must be turned upside down to remove the cake after being baked, and then the cake must be turned back to rest on its bottom. This is necessary, not only to disengage the cake from the portion of the dish surrounding it, but to ice the sides of the same, as is the general practice with cakes of this character, especially for weddings, parties, and other social gatherings. This emptying of the cake tends to break and mar the sides, rendering it difficult to ice the same, and also tears pieces from the bottom, requiring, in many cases, that it be wedged up to maintain an upright position on the plate on which it is placed.

The object of this invention is, first, to provide a rim for the dish which can be removed without disturbing the seat of the cake on the dish, and, second, to so connect the center flue with the bottom of the dish that it also may be detached without moving the cake. The mechanism by which we accomplish this result is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of one form of our cake-dish. Fig. 2 is a central vertical section through Fig. 1. Fig. 3 is a central vertical section through the flue and a portion of the bottom of the dish, shown in Fig. 4. Fig. 4 is a side view of a modified form of the cake-dish, and Fig. 5 a perspective view of the same.

Similar letters indicate like parts throughout the several views.

Referring to the details of the drawings, A indicates the bottom of the dish and is generally of the same shape as an ordinary pie-dish, consisting of a bowl *a*, having a horizontal flange *a'* that serves as a hold by which to move the cake-dish about.

The rim B of the cake-dish is formed of a hollow cylinder, open at both ends and of the same diameter as the inside of the bottom of the bowl *a*, the sides of which may be either vertical, as shown in Figs. 1 and 2, or slope outward and upward from the bottom to the flange, as shown in Figs. 4 and 5. The rim sets loosely on the bottom of the bowl and is prevented from moving laterally by the sides thereof. The rim may be unbroken, as seen in Figs. 1 and 2, or it may be made of some flexible material and cut through vertically on one side, so as to be expansible, as shown in Figs. 4 and 5.

On the rim on one side of the cut there are hinged one or more hasps *b*, having slots *b'* adapted to take over detents secured to the rim on the other side of the cut. These detents are formed of horizontal revoluble pins *p*, having hand-holds *p'* projecting from only one side of the free end thereof, which are turned in a horizontal position toward the hasps when the latter are to engage them, and after being so engaged are again turned to lap the outer faces of the hasps. It is preferable that the vertical edges of the rim should not lap but have their butts fit snugly against each other, as shown in Fig. 4. For this reason the means for fastening the movable ends of the hasps should be of such a character as to avoid any movement of the edges of the wall with relation to each other while the hasps are being secured or released.

In the center of the bottom of the cake-dish there is placed the usual flue P for conveying heat to the center of the cake; but instead of permanently securing it to the bottom we detachably connect it therewith. In the drawings we illustrate two forms of the flue P. That shown in Fig. 2 is a vertical hollow cylinder adapted to embrace and fit snugly over a flange F, surrounding the aperture *f* in the bottom of the dish. This flue has the ends of a loop *f'* secured to the opposite sides of its interior with the apex extending upward to serve as a hand-hold, by which the flue may be more readily put in place and removed from the dish. This loop also enables the flue to be rotated back and forth as it is being withdrawn from the dish to loosen it from the cake. The flue shown in Figs. 3 and 5 is the usual frustum of a

cone. This flue is inserted by pushing it up from the bottom through the aperture *f*, the sides of which, with the inner face of the flange *F*, are tapered to correspond with the shape of the conical flue. It is not absolutely necessary that the flange *F* be used with this form of flue; but it is preferable, as affording a greater bearing-surface. This flue is also provided with a loop, as shown at *g*; but in this case the apex extends downward.

In using the cake-dish, the rim *B* and flue *P* being in place, the inner surfaces are properly greased, as is usual, and the dough put into the dish, the contact of the lower edge of the rim *B* with the sides of the bowl *a* preventing any escape of dough beneath the rim, should not the weight thereof be sufficient for that purpose. After the cake is baked the rim and flue are removed, leaving the cake exposed on all sides.

In the forms of dish shown in Figs. 1 and 2 both the rim and flue are removed by simply raising them straight up from the bottom *A*. In the form shown in Figs. 3, 4, and 5 the flue is drawn out by pulling it downward, while the rim is removed by opening the hasps *b* and then unwinding the said rim from the cake, as shown in Fig. 5.

In Figs. 1 and 2 the rim of the bowl *a* is shown as being vertical; but where said rim is to be opened the sides of the bowl are sloped, as shown in Figs. 4 and 5, to permit the rim to be opened without injuring the side of the cake. The latter form of rim is the only one which can be used with dishes in which a cake is to be baked having the shape of an inverted frustum of a cone. The form of flue shown in the latter figures is applicable to any form of dish, and is preferable to the straight

flue, as it retards to some extent the escape of heat at the top.

We do not limit ourselves to any particular manner of connecting the edges of the rim where it is cut, as it is obvious that that can be accomplished in a number of ways.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a cake-dish, the combination, with the base or bottom, of a flue removably connected with said base or bottom, and a hand-hold located in the flue, substantially as and for the purpose specified.

2. In a cake-dish, the combination, with the base or bottom, of an expansible rim seated on said base or bottom, a removable flue, and a hand-hold located in the flue, substantially as and for the purpose specified.

3. In a cake-dish, the combination, with the base or bottom having an aperture therein, of a flange formed about said aperture, a flue adapted to engage said flange, and a hand-hold located in the flue, substantially as and for the purpose specified.

4. In a cake-dish, the combination, with the base or bottom having an aperture therein, of a flange formed about said aperture and having one of its faces sloping toward the center, a conical flue adapted to engage said sloping face, and a hand-hold located in the flue, substantially as and for the purpose specified.

THADDEUS H. RESSLER.
ANNIE M. RESSLER.

Witnesses:

JACOB HALBACH,
WM. R. GERHART.

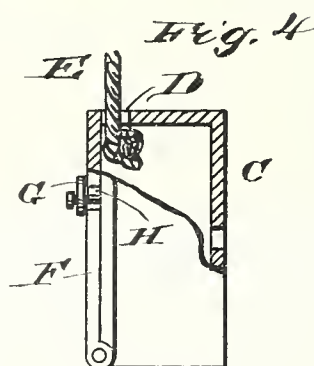
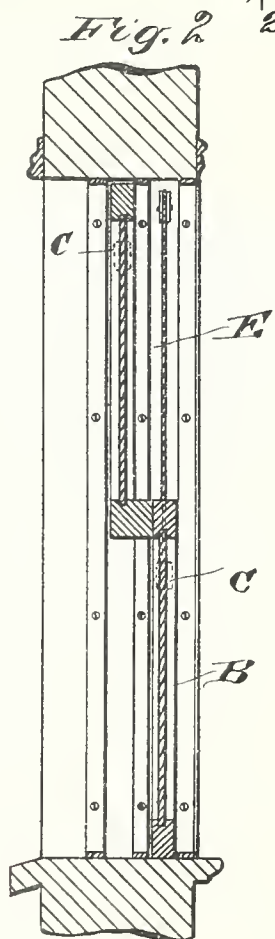
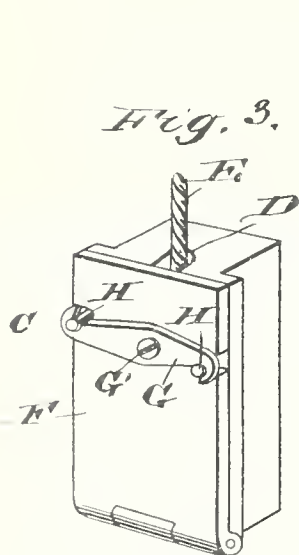
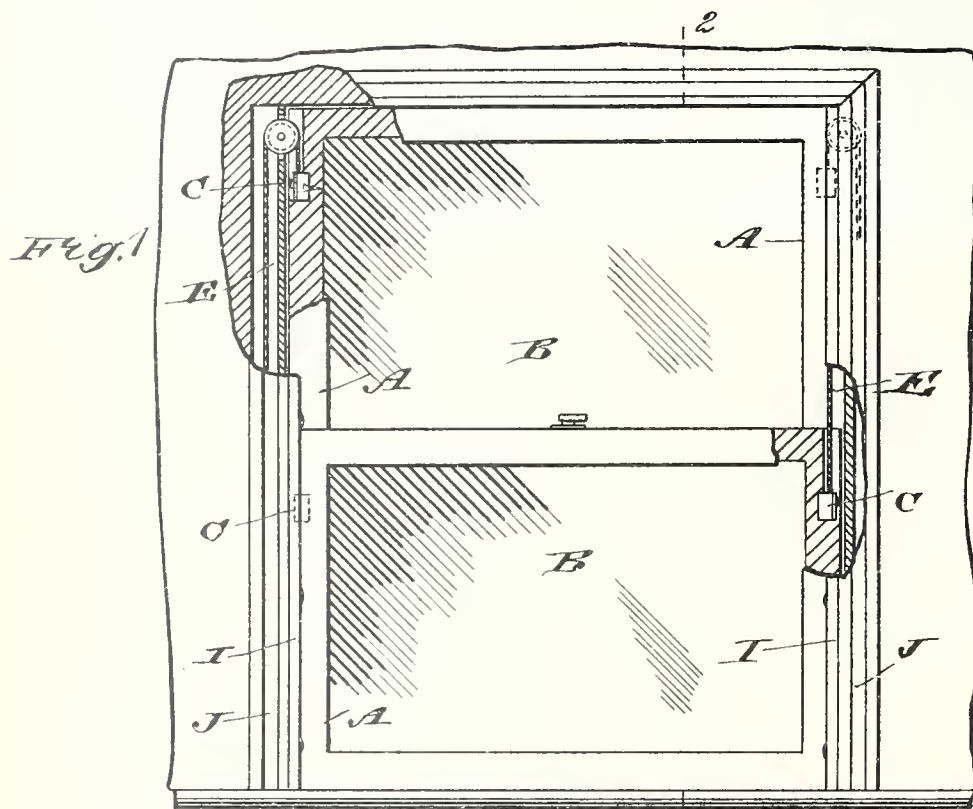


(No Model.)

M. J. HUFMAN.
SASH CORD FASTENER.

No. 487,570.

Patented Dec. 6, 1892.



WITNESSES:

J. A. Beeghly
L. Sedgwick

INVENTOR

M. J. Huffman
BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

MARGARET JANE HUFMAN, OF ASHLAND, PENNSYLVANIA.

SASH-CORD FASTENER.

SPECIFICATION forming part of Letters Patent No. 487,570, dated December 6, 1892.

Application filed June 16, 1892. Serial No. 436,922. (No model.)

Corrections in Letters Patent No. 487,570.

It is hereby certified that in Letters Patent No. 487,570, granted December 6, 1892, upon the application of Margaret Jane Huffman, of Ashland, Pennsylvania, for an improvement in "Sash-Cord Fasteners," errors appear in the printed specification requiring correction as follows: After line 62, page 1, the following paragraph should be inserted to wit: *Each of the cords for each sash passes over the usual pulley in the window-frame and carries at its other end a counterbalancing weight;* and the paragraph commencing with line 63, page 1, and terminating with line 76, same page, should be stricken out; and that the said Letters Patent should be read with these corrections therein to conform to the papers pertaining to the case in the Patent Office.

Signed, countersigned, and sealed this 17th day of January, A. D. 1893.

[SEAL.]

CYRUS BUSSEY,

Assistant Secretary of the Interior.

Countersigned:

W. E. SIMONDS,

Commissioner of Patents.

in a knot extending under the top of the easing, as will be readily understood by reference to Fig. 4, so that the cord is connected with the window-sash.

One side of the easing C is adapted to be opened or closed by a lid F, hinged at its lower end to the casing and provided with a look-bar G, pivoted to the easing at the middle and formed at its ends with hooks extending in opposite directions and engaging corresponding pins H, projecting from the front of the easing, as will be readily understood by reference to Fig. 3.

In order to open the lid F, the look-bar G is turned so that its ends disengage the headed pins H, and then the lid F can be swung downward, so that the easing is opened and the cord or chain E can be moved into or out of the recess D to connect or disconnect the cord or chain from the easing.

When the cord is inserted in the easing, as described, and the lid F is closed and locked in position by the look-bar G engaging with its ends the pins H, then the said cord is locked in place in the casing, and as the latter is fastened by a screw or other means to

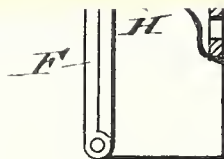
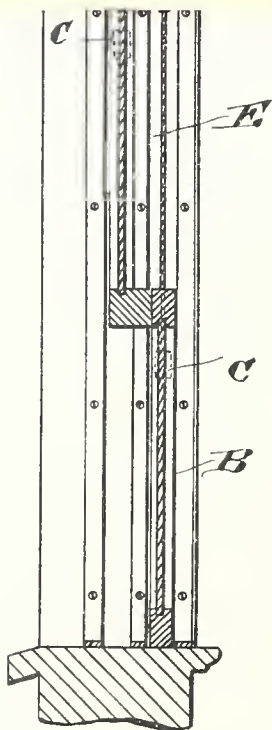
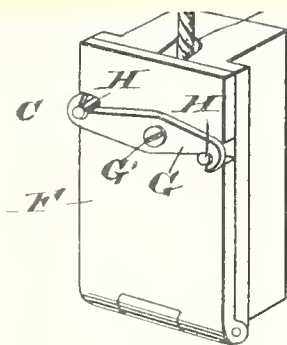
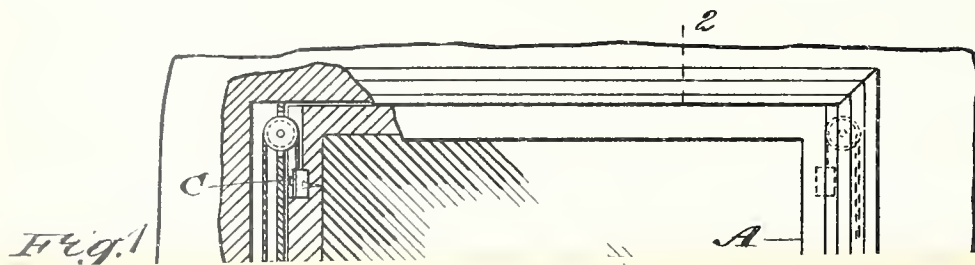
as illustrated in Figs. 1 and 2, and it is desired to remove the window-sash for cleaning the panes of glass or for other purposes then the operator removes the beads I from the window-casing. The sash is then pulled out of its guideways on the window-frame, so that the operator has access to the lids F, which are now opened by turning the look-bars G until the latter disengage the hook-pins H. The lids F are then swung open and the cords E are removed from the easing C, so that the window-sash is disconnected from the opened easing and can be lifted clear off the latter for further treatment. It is understood that in proceeding to take out both sashes of a window the front sash is first removed, and then the second sash is treated in the manner above described. The easing C is let into the stile A to a sufficient depth so that the casing, with its lid, will not project either to one side or to the front, so as to rub against the jamb or bead. It is further understood that each bead I partly covers the casing and its lid, so that the easing cannot be opened unless the bead is first removed. When the sashes are washed or otherwise treated, they are again inserted in the window-easing, the

(No Model.)

M. J. HUFMAN.
SASH CORD FASTENER.

No. 487,570.

Patented Dec. 6, 1892.



WITNESSES:
J. A. Burdette
L. Sedgwick

INVENTOR
M. J. Huffman
BY *Munn & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

MARGARET JANE HUFMAN, OF ASHLAND, PENNSYLVANIA.

SASH-CORD FASTENER.

SPECIFICATION forming part of Letters Patent No. 487,570, dated December 6, 1892.

Application filed June 16, 1892. Serial No. 436,922. (No model.)

To all whom it may concern:

Be it known that I, MARGARET JANE HUFMAN, of Ashland, in the county of Schuylkill and State of Pennsylvania, have invented a new and useful Improvement in Sash-Cord Fasteners, of which the following is a full, clear, and exact description.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front view of the improvement with parts in section. Fig. 2 is a transverse section of the same on the line 2 2 of Fig. 1. Fig. 3 is a perspective view of the casing. Fig. 4 is a transverse section of the same.

In the stiles A of each window-sash B are secured casings C, located near the upper ends of the stiles, as is plainly illustrated in Fig. 1. Each casing C is formed on its top to one side with an opening D for the passage of the supporting cord or chain, having its end tied in a knot extending under the top of the casing, as will be readily understood by reference to Fig. 4, so that the cord is connected with the window-sash.

One side of the casing C is adapted to be opened or closed by a lid F, hinged at its lower end to the casing and provided with a lock-bar G, pivoted to the casing at the middle and formed at its ends with hooks extending in opposite directions and engaging corresponding pins H, projecting from the front of the casing, as will be readily understood by reference to Fig. 3.

In order to open the lid F, the lock-bar G is turned so that its ends disengage the headed pins H, and then the lid F can be swung downward, so that the casing is opened and the cord or chain E can be moved into or out of the recess D to connect or disconnect the cord or chain from the casing.

When the cord is inserted in the casing, as described, and the lid F is closed and locked in position by the lock-bar G engaging with its ends the pins H, then the said cord is locked in place in the casing, and as the latter is fastened by a screw or other means to

the stile the cord is connected with the window-sash. The fulcrum of the lock-bar G is in the form of a screw G', screwing in the casing-lid, so that when the bar G engages the pins H the fulcrum-screw can be farther screwed inward to securely lock the bar G in place to prevent its accidental displacement by jars of the window-sash. The inner end of the fulcrum-screw G' is blunted to prevent the screw from unscrewing in the lid F.

The beads or runners I for the window-sashes are secured to the jambs J by means of screws K, each engaging with its inner threaded end a nut L, fastened by screws or other means to the jamb J, as will be readily understood by reference to Fig. 5. In order to prevent the screws K from enlarging the apertures in the beads I through which they pass and to hold the screws in place in the beads, each of the said apertures is lined with a metallic threaded sleeve N, in which screws the screw K, so that the latter is securely held in place in the bead I and readily registers with the nut L, into which its inner end screws.

Now, when the several parts are connected, as illustrated in Figs. 1 and 2, and it is desired to remove the window-sash for cleaning the panes of glass or for other purposes then the operator removes the beads I from the window-casing. The sash is then pulled out of its guideways on the window-frame, so that the operator has access to the lids F, which are now opened by turning the lock-bars G until the latter disengage the hook-pins H. The lids F are then swung open and the cords E are removed from the casing C, so that the window-sash is disconnected from the opened casing and can be lifted clear off the latter for further treatment. It is understood that in proceeding to take out both sashes of a window the front sash is first removed, and then the second sash is treated in the manner above described. The casing C is let into the stile A to a sufficient depth so that the casing, with its lid, will not project either to one side or to the front, so as to rub against the jamb or bead. It is further understood that each bead I partly covers the casing and its lid, so that the casing cannot be opened unless the bead is first removed. When the sashes are washed or otherwise treated, they are again inserted in the window-casing, the

5 cords are placed in position in the casing C, and the latter are closed by their lids F, as above described, after which the sash is inserted in the window-frame and the beads are again fastened in place on the jambs. The window-sash is then again in position to be raised and lowered in the usual manner.

10 It will be seen that by this construction the operator is enabled to conveniently and readily remove the window-sashes at any time for cleaning the panes of glass or for other purposes.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

15 A sash-cord fastener comprising the box C, having an open outer side, a slot D in the outer edge of its top, and pins H H, a hinged cover F, and a double latch G, pivoted between its ends to the outer side of the cover and engaging the pins with its ends, substantially as set forth. 20

MARGARET JANE HUFMAN.

Witnesses:

E. H. WETZEL,

JOHN C. GARNER.

(No Model.)

A. E. DIVINE.
SAFETY PIN.

No. 485,263.

Patented Nov. 1, 1892.

Fig. 1.

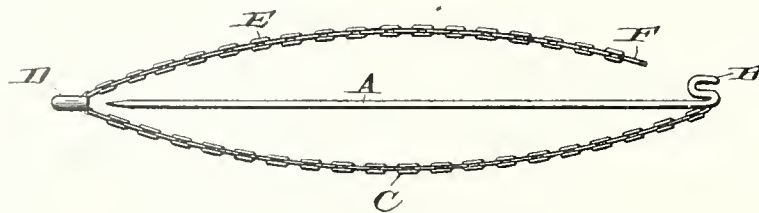
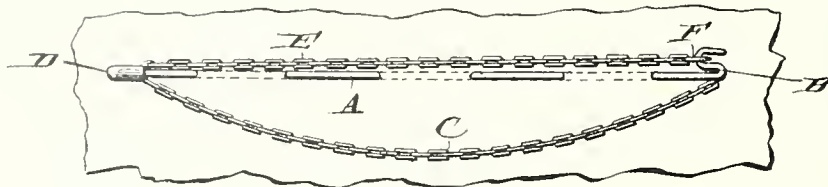


Fig. 2.



Anna Elliott Divine

Inventor:

Witnesses:

W. J. Divine

Margaret Bourke

UNITED STATES PATENT OFFICE.

ANNA ELLIOTT DIVINE, OF DEVON, PENNSYLVANIA.

SAFETY-PIN.

SPECIFICATION forming part of Letters Patent No. 485,263, dated November 1, 1892.

Application filed July 24, 1891. Serial No. 400,661. (No model.)

To all whom it may concern:

Be it known that I, ANNA ELLIOTT DIVINE, a citizen of the United States, residing at Devon, in the county of Chester and State of Pennsylvania, have invented a new and useful Secure Pin-Fastener, of which the following is a specification.

My invention relates to an improvement in fastening pins, in which a cap is securely held upon the point of the pin and maintained in this position by means of a chain, which is unhooked when the pin is taken out; and the objects of my improvement are, first, to provide for the secure fastening of the pin and the protection of the point of the pin, and, second, to enable the pin to be unfastened by releasing the point from the cap, which is done by unhooking the chain by which it is secured. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents the pin when open, Fig. 2 when fastened and pinned into the material.

Similar letters refer to similar parts throughout the different figures.

In the drawings, A designates the pin; B, the hook at the head of the pin; C, the lower

chain; D, the cap or point-protector; E, the upper chain; F, the large link at the end of upper chain.

The cap D covers the point of the pin and is secured in this position by passing the link F over the hook B, link F being connected to cap D by upper chain E, this chain being the same length as the pin, less the length of cap D. This chain being of such a length keeps the cap D securely on the point of the pin, as shown in Fig. 2. When unfastened, as in Fig. 1, the cap is secured against being lost by lower chain C.

What I claim, and desire to secure by Letters Patent, is—

A safety-pin having a cap adapted to be held upon the point of the pin or loosened therefrom by a chain connected to the cap and detachably connected to the head of the pin and a second chain attached to the cap and to the head of the pin to retain the first-named chain and cap.

ANNA ELLIOTT DIVINE.

Witnesses:

ANNA ELLIOTT,
BELLE ELLIOTT.

(No Model.)

S. REICHART.
COVER OR PROTECTOR FOR PLANTS.

No. 489,500.

Patented Jan. 10, 1893.

Fig. 1.

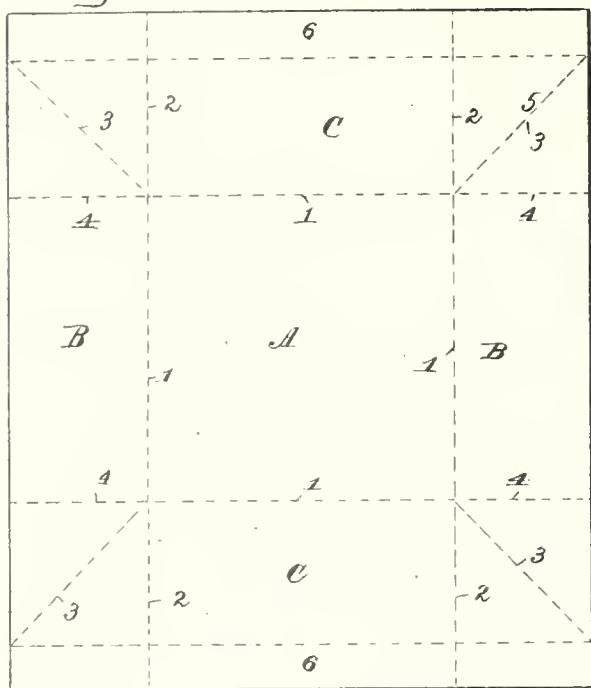


Fig. 2.

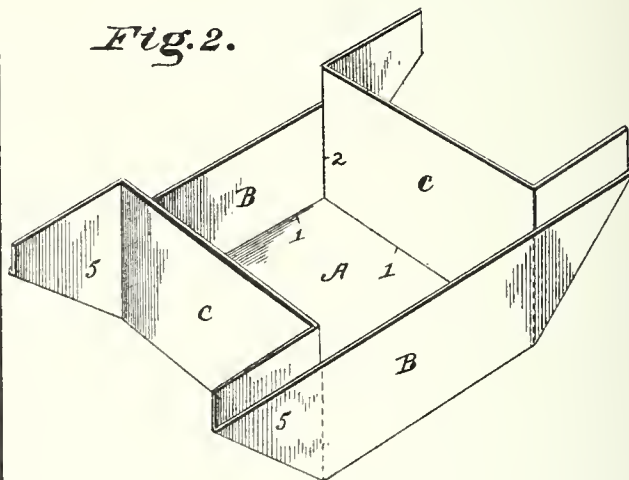


Fig. 4.

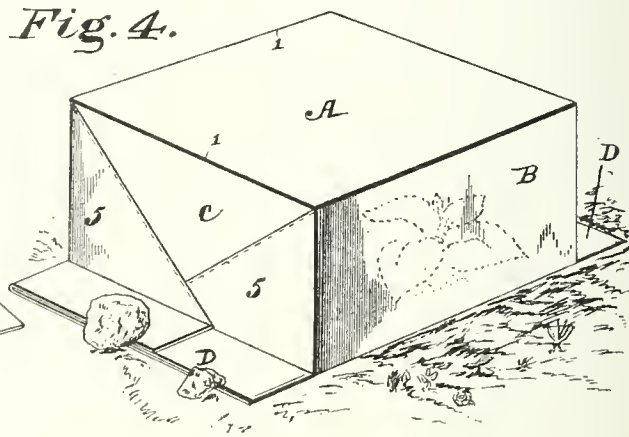


Fig. 3.

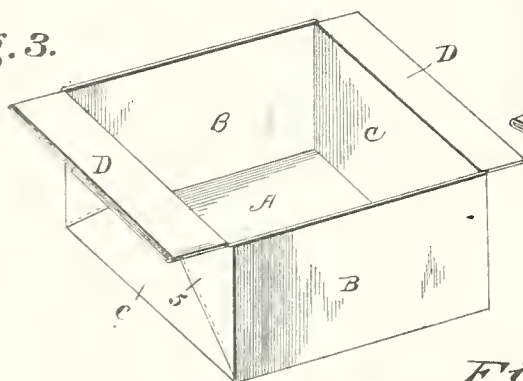
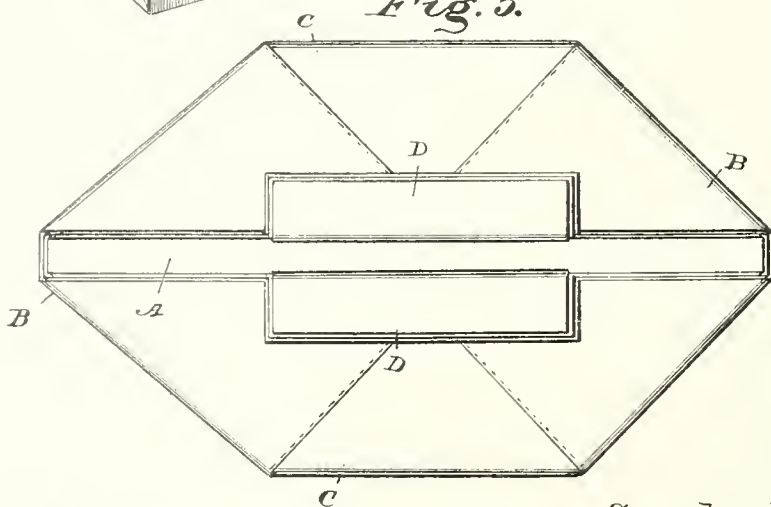


Fig. 5.



Witnesses

J. Ulke, Jr.

Charles S. Rye

By her Attorneys,

C. A. Snow & Co.

Inventor
Sarah Reichart.

UNITED STATES PATENT OFFICE.

SARAH REICHART, OF MAINVILLE, PENNSYLVANIA.

COVER OR PROTECTOR FOR PLANTS.

SPECIFICATION forming part of Letters Patent No. 489,500, dated January 10, 1893.

Application filed February 10, 1892. Serial No. 420,975. (No model.)

To all whom it may concern:

Be it known that I, SARAH REICHART, a citizen of the United States, residing at Mainville, in the county of Columbia and State of Pennsylvania, have invented a new and useful Cover or Protector for Plants, of which the following is a specification.

My invention relates to covers or protectors for plants, and consists in the construction and arrangement, from a single uncut blank, of a box formed by folding the parts thereof in such manner as to provide a shield to be placed over young plants to protect them from the sun's rays and the weather, or, if used in larger form, to act as a covering to resist the action of frost and wind.

My invention further consists in the provision of an integral attachment projecting from the ends of the box when formed, whereby said box may be held in place by the application of weights or fastenings to said attachment.

The object of my invention is to provide a device of this character requiring but a small amount of labor to construct the same, without waste of material and the use of machinery, and that can be placed upon the market in such compact form and arrangement as to be readily set up and used without employing any great amount of skillful manipulation.

Further objects and particular advantages will be more fully hereinafter set forth and pointed out in the claim.

In the drawings—Figure 1 represents a plan view of the blank of which my improved device is formed, and illustrating the lines of folds. Fig. 2 is a perspective view of the device shown partially folded. Fig. 3 is a perspective view of the device completely folded and ready for use. Fig. 4 is a perspective view of the device shown in position over a plant, and also illustrating the several folds connected by stitches as a means of fastening. Fig. 5 represents a plan view of the device in the form in which it will be put upon the market, showing a number of the devices stored therein.

By reference to Fig. 1, A represents the top of the box or cover, B, B, the sides, and C the ends, which are formed by the folds as fol-

lows: The top A is surrounded by the fold 1, the sides B by the folds 4, 4, and 1, and the ends C by the folds 2, 2, and 1, as well as an edge-fold as will be hereinafter more fully set forth. Between the folds 2 and 4 are bellows corner-folds, formed on the lines 3, and forming a triangular flap 5 when arranged in position against the ends C. Along the edges of the ends C and angular flaps 5 as formed by said bellows folds, is an edge-flap 6 that is folded down at right angles to the ends C to form a securing tongue or integral attachment D.

In arranging the cover in form for use, the sides B and ends C are brought up into vertical planes with the angular flaps 5 projecting from the said ends C, as shown in Fig. 2. The angular flaps 5 are then folded against the ends C, and the edge-flaps 6 turned down at an angle as shown in Fig. 3. The flaps at the ends C may be secured by lines of stitching as shown, or by the use of metallic clips, adhesive substances, or other means as may be found desirable. In this arrangement the box or cover is placed over the plant to be protected as shown in Fig. 4, and weights, such as stone, gravel, or sand, are placed on the securing tongue or attachment D, to sustain the same in position. The inside portions of the angular flaps 5, and the ends C project above the outer portions of the said angular flaps 5, and the side B, and the said flaps 5 when turned inward slightly overlap and reinforce the end-construction of the cover or protector. The projecting portions that extend higher than the sides B, as above referred to, are unitedly turned over, as shown by Fig. 3, to form the tongues D, and are therefore of double thickness and rendered stronger and more durable to resist wear and prevent the same from becoming readily torn asunder from the main portion of the protector or cover.

The device may be used as a protector for either small or large plants by proportionately increasing the size thereof, and it will be understood that various sizes will be constructed and placed upon the market. The material of which the device will be composed is either light or heavy paper, or other

flexible material, and can be rendered water-proof by treatment with a water-proofing compound.

5 As shown in Fig. 5, the device is represented as having the parts thereof inseparably joined and flattened out for storage in compact form, and as it will be placed upon the market. By catching hold of the two
10 ends and raising them to a vertical position, the cover or protector can be readily formed as shown in Fig. 4 and be made ready for use. In this condition the device may be used to receive a number of similar devices in flattened form, and thereby provide a compact
15 storage of the same for transportation or other purposes.

20 It will be observed that by the construction set forth a knockdown cover or protector is provided that may be readily packed away or set up for use.

Having thus described my invention, what I claim as new is—

In a knockdown cover or protector for plants,

the combination of closed top, sides, and ends and open bottom, having bellows folds formed 25 at the corners thereof and of angular contour, the inner portions of said corner folds and the ends of the protector being extended and longer than the sides of the same, and the said corner folds being bent inward to overlap 30 each other and reinforce the ends, and the extended portions of said ends being unitedly bent over to provide tongues that extend at right angles from the opposite ends of the bottom portion, said parts being secured together and adapted to be made water-proof, 35 the entire device being formed from a single uncut blank, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 40 the presence of two witnesses.

SARAH REICHART.

Witnesses:

W. L. EYERLY,
WILL L. CRYST.

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